

HANDBOUND
AT THE

UNIVERSITY OF
TORONTO PRESS



Digitized by the Internet Archive in 2010 with funding from University of Toronto





MEDICO-CHIRURGICAL
TRANSACTIONS.

PUBLISHED BY

THE ROYAL

MEDICAL AND CHIRURGICAL SOCIETY

of

LONDON.

VOLUME THE THIRTY-SEVENTH.

LONDON:

LONGMAN, BROWN, GREEN, AND LONGMANS, PATERNOSTER-ROW.

1854

P 35 R67 V.37

MEDICO-CHIRURGICAL TRANSACTIONS.

PUBLISHED BY

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY

OF

LONDON.

SECOND SERIES.

VOLUME THE NINETEENTH.



LONDON:

LONGMAN, BROWN, GREEN, AND LONGMANS, PATERNOSTER-ROW.

185-L

12/6

ADVERTISEMENT.

THE Council of the Royal Medical and Chirurgical Society deems it proper to state, that the Society does not hold itself in any way responsible for the statements, reasonings, or opinions set forth in the various papers, which, on grounds of general merit, are thought worthy of being published in its Transactions.



CONTENTS.

	PAGE
List of Officers and Council	v
List of Referees	vii
List of Presidents of the Society	viii
List of Fellows of the Society	xi
I. Scrofulous Caries of the Left Astralagus. Excision—cure, with formation of a Fresh Joint. By S. F. Statham, Assistant-Surgeon University College Hospital	
II. Pathological Remarks on the kind of Palpebral Tumour usually called, in England, Tarsal Tumour. By H. Haynes Walton, Esq., F.R.C.S., Surgeon to the Central London Ophthalmic Hospital; Assistant-Surgeon to St. Mary's Hospital	
III. Notice of a Case of Skin Disease, accompanied with partial Hypertrophy of the Mammary Gland. By James Alderson, M.D., F.R.S., Senior Physician to St. Mary's Hospital; One of the Vice-Presidents of the Society.	
IV. Case of Mollitics Ossium, preceded by Degeneration of the Muscles. By Thomas K. Chambers, M.D., Physician to St. Mary's Hospital	19
V. On the Keloid of Alibert, and on True Keloid. By Thos. Addison, M.D., Physician to Guy's Hospital	27
VI. On the Blood and Effused Fluids of Gout, Rheumatism, and Bright's Disease. By Alfred B. Garrod, M.D., Professor of Materia Medica, Therapeutics, and Clinical Medicine, at University College; and Physician to University College Hospital (Second Communication)	Ē
VII. On Excision of the Knec-Joint. By G. M. Jones, Esq., M.R.C.S.E., Surgeon to the Jersey Hospital	
VIII. On the Radical Cure of Reducible Inguinal Hernia, by a New Operation, with Cases and Remarks. By T. Spencer Wells F.R.C.S.	,
VVVVII (I	

1	PAGE
IX. Observations of Morbid Changes in the Mucous Membrane of the Stomach. By Dr. Hanfield Jones. Communicated by Dr. Bence Jones	87
X. A Case of Fatal Asphyxia, caused by the detachment of a diseased Bronchial Gland which was impacted in the Larynx. By George Edwardes, of Wolverhampton, Fellow of the Royal College of Surgeons of England, and of the Royal Medical and Chirurgical Society of London; late Surgeon to the South Staffordshire General Hospital	151
XI. Remarks on a peculiar form of Tumour of the Skin, denominated "Pachydermatocele," illustrated by Cases. By Valentine Mott, M.D., C.L.D., Emeritus Professor of Surgery in the University of New York	155
XII. Case of Distortion of the Spine, with observations on Rotation of the Vertebræ as a complication of Lateral Curvature. By Thos. Hodgkin, M.D., L.R.C.P., and Wm. Adams, F.R.C.S., Assistant-Surgeon to the Royal Orthopædic Hospital; Demonstrator of Morbid Anatomy at St. Thomas's Hospital.	167
XIII. On Gout and Rheumatism. The differential Diagnosis, and the Nature of the so-called Rheumatic Gout. By Alfred Baring Garrod, M.D., Professor of Materia Medica, Therapeutics, and Clinical Medicine, at University College; Physician to University College Hospital	181
XIV. Case of Traumatic Ancurism of the Ophthalmic Artery, consequent on Injury of the Head, cured by Ligature of the common Carotid Artery. By T. B. Curling, F.R.S., Surgeon to the London Hospital	221
XV. English Statistics of Hooping-Cough. By Edward Smith, M.D., LL.B., London University, &c., Honorary Secretary of the Medical Society of London. Communicated by H. Bence Jones, M.D	227
Donations to the Library	255
Index	961

ROYAL

MEDICAL AND CHIRURGICAL SOCIETY OF LONDON.

PATRON.

THE QUEEN.

OFFICERS AND COUNCIL, ELECTED MARCH 1, 1854.

President.

JAMES COPLAND, M.D. F.R.S.

THOMAS ALFRED BARKER, M.D.
ROBERT BENTLEY TODD, M.D. F.R.S.
THOMAS BELL, F.R.S.
THOMAS WORMALD.

JOSEPH MOORE, M.D.

THOMAS BLIZARD CURLING, F.R.S.

WILLIAM R. BASHAM, M.D.

SECRETARIES. { HOLMES COOTE.

LIBRARIANS.

OTHER MEMBERS

OF COUNCIL.

WILLIAM WEGG, M.D.

JAMES DIXON.

GEORGE CHAPLIN CHILD, M.D.
WILLIAM DINGLE CHOWNE, M.D.
MERVYN A. N. CRAWFORD, M.D.

HENRY S. DYER, M.D.

THOMAS II. SILVESTER, M.D.

JOHN AVERY.

WILLIAM HARVEY.

HENRY D. JONES.

JOHN SIMON, F.R.S.

HENRY SPENCER SMITH.

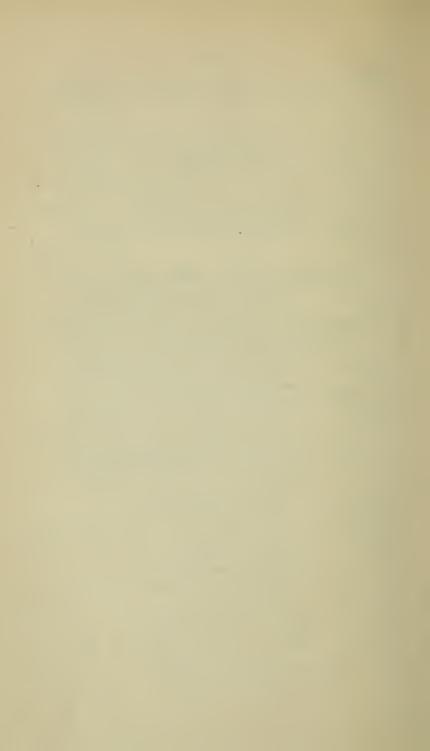
TRUSTEES OF THE SOCIETY.

JAMES M. ARNOTT, F.R.S.

JAMES COPLAND, M.D. F.R.S.

EDWARD STANLEY, F.R.S.

RESIDENT ASSISTANT-LIBRARIAN.
THOMAS WILLIAMS.



FELLOWS OF THE SOCIETY APPOINTED BY THE COUNCIL AS REFEREES OF PAPERS,

FOR THE SESSION OF 1854-55.

ARNOTT, JAMES MONCRIEFF, F.R.S. BABINGTON, BENJAMIN GUY, M.D. F.R.S. BALLARD, EDWARD, M.D. BALY, WILLIAM, M.D. F.R.S. BIRD, GOLDING, M.D. F.R.S. BIRKETT, EDMUND LLOYD, M.D. BIRKETT, JOHN. BOWMAN, WILLIAM, F.R.S. BRODIE, SIR BENJAMIN COLLINS, BART., F.R.S. BUDD, GEORGE, M.D. F.R.S. BURROWS, GEORGE, M.D. F.R.S. BUSK, GEORGE, F.R.S. CHAMBERS, THOMAS KING, M.D. COCK, EDWARD. CURSHAM, GEORGE, M.D. DICKSON, ROBERT, M.D. FARRE, ARTHUR, M.D. F.R.S. FERGUSON, ROBERT, M.D. FERGUSSON, WILLIAM, F.R.S. HAWKINS, CÆSAR HENRY. HENNEN, JOHN, M.D. HILTON, JOHN, F.R.S. HODGKIN, THOMAS, M.D. JOHNSON, GEORGE, M.D. JONES, HENRY BENCE, M.D. F.R.S. LAWRENCE, WILLIAM, F.R.S. LEE, ROBERT, M.D. F.R.S. LOCOCK, CHARLES, M.D. LUKE, JAMES. MAYO, THOMAS, M.D. F.R.S. PAGET, JAMES, F.R.S. SHARPEY, WILLIAM, M.D. F.R.S. SOLLY, SAMUEL, F.R.S. STANLEY, EDWARD, F.R.S. TRAVERS, BENJAMIN, F.R.S. WEST, CHARLES, M.D.

A LIST OF THE PRESIDENTS OF THE SOCIETY, FROM ITS FORMATION.

ELECTED

- 1805. WILLIAM SAUNDERS, M.D.
- 1808. MATTHEW BAILLIE, M.D.
- 1810. SIR HENRY HALFORD, BART., M.D. G.C.H.
- 1813. SIR GILBERT BLANE, BART., M.D.
- 1815. HENRY CLINE.
- 1817. WILLIAM BABINGTON, M.D.
- 1819. SIR ASTLEY PASTON COOPER, BART., K.C.H. D.C.L.
- 1821. JOHN COOKE, M.D.
- 1823. JOHN ABERNETHY.
- 1825. GEORGE BIRKBECK, M.D.
- 1827. BENJAMIN TRAVERS.
- 1829. PETER MARK ROGET, M.D.
- 1831. WILLIAM LAWRENCE.
- 1833. JOHN ELLIOTSON, M.D.
- 1835. HENRY EARLE.
- 1837. RICHARD BRIGHT, M.D.
- 1839. SIR BENJAMIN COLLINS BRODIE, BART.
- 1841. ROBERT WILLIAMS, M.D.
- 1843. EDWARD STANLEY.
- 1845. WILLIAM FREDERICK CHAMBERS, M.D. K.C.H.
- 1847. JAMES MONCRIEFF ARNOTT.
- 1849. THOMAS ADDISON, M.D.
- 1851. JOSEPH HODGSON.
- 1853. JAMES COPLAND, M.D. F.R.S.

FELLOWS

OF THE

ROYAL MEDICAL AND CHIRURGICAL SOCIETY OF LONDON.

EXPLANATION OF THE ABBREVIATIONS.

P.—President.

V.P.—Vice-President.

T .- Treasurer.

S .- Secretary.

L.-Librarian.

C .- Member of Council.

AUGUST 1854.

Amongst the non-residents, those marked thus (*) are entitled by composition to receive the Transactions.

- 1841 *JAMES ABERCROMBIE, M.D., Cape of Good Hope.
- 1846 *John Abertrombie, M.D., Physician to the General Dispensary, Cheltenham; Cheltenham.
- 1851 *Henry Wentworth Acland, M.D. F.R.S., Physician to the Radeliffe Infirmary, Oxford.
- 1842 WILLIAM ACTON, Queen Anne-street, Cavendish-square.
- 1818 Walter Adam, M.D., Physician to the Royal Public Dispensary, Edinburgh.
- 1851 JOHN ADAMS, Surgeon to the London Hospital; St. Helen's-place, Bishopsgate-street.
- 1852 WILLIAM ADAMS, Assistant-Surgeon to the Royal Orthopædic Hospital; Demonstrator of Morbid Anatomy, St. Thomas's Hospital; 5, Henrietta-street, Cavendish-sq.
- 1818 Thomas Addison, M.D., Physician to, and Lecturer on Medicine at, Guy's Hospital; New-street, Springgardens. C. 1826. V.P. 1837. P. 1849. C. 1853.
- 1814 Joseph Agen, M.D., Great Portland-street, Portland-place. C. 1836.

- 1837 *RALPH FAWSETT AINSWORTH, M.D., Manchester.
- 1819 GEORGE FREDERICK ALBERT.
- 1839 RUTHERFORD ALCOCK, K.C.T. K.T.S., China.
- 1826 James Alderson, M.D. F.R.S., Physician to St. Mary's Hospital; Berkeley-square. S. 1829. C. 1848. T.1849. V.P. 1853.
- 1843 CHARLES JAMES BERRIDGE ALDIS, M.D., Physician to the London and Surrey Dispensaries, and Lecturer on Medicine at the Hunterian School of Medicine; Chesterterrace, Chester-square.
- 1850 CHARLES REVANS ALEXANDER, Assistant-Surgeon to the Royal Infirmary for Diseases of the Eye; Cork-street, Bond-street.
- 1813 HENRY ALEXANDER, F.R.S., Surgeon-Oculist in Ordinary to the Queen, and Surgeon to the Royal Infirmary for Diseases of the Eye; Cork-street, Bond-street. C. 1840. V.P. 1850.
- 1836 HENRY ANCELL, Norfolk-crescent, Oxford-square. C 1847.
- 1817 ALEXANDER ANDERSON.
- 1820 THOMAS ANDREWS, M.D., Norfolk, Virginia.
- 1813 WILLIAM ANKERS, Knutsford.
- 1819 PROFESSOR ANTOMMARCHI, Florence.
- 1825 THOMAS GRAHAM ARNOLD, M.D., Stamford.
- 1819 James Moncrieff Arnott, F.R.S., New Burlington-street. L. 1826. V.P. 1832. T. 1835. C. 1846. P. 1847.
- 1817 JOHN ASHBURNER, M.D. M.R.I.A., 40, York-place, Portman-square. C. 1821.
- 1851 THOMAS JOHN ASHTON, Surgeon to the Blenheim Dispensary; 31, Cavendish-square.
- 1841 JOHN AVERY, Surgeon to the Charing-cross Hospital; Queen-street, May-fair. C. 1854.
- 1825 Benjamin Guy Babington, M.D. F.R.S., Physician to the Deaf and Dumb Institution; George-street, Hanoversquare. C. 1829. V.P. 1845. T. 1848.
- 1846 CORNELIUS METCALFE STUART BARINGTON, M.D., Physician to Queen Charlotte's Lying-in Hospital; 29, Hertford-street, May-fair.
- 1820 *John H. Badley, Dudley.
- 1838 FRANCIS BADGLEY, M.D., Toronto, Upper Canada.

1840 WILLIAM BAINBRIDGE, Kingston, Surrey.

1836 Andrew Wood Baird, M.D., Ipswich.

1851 *Alfred Baker, Surgeon to the General Hospital, Birmingham.

1839 THOMAS GRAHAM BALFOUR, M.D., Royal Military Asylum; Chelsea. C. 1852.

1848 EDWARD BALLARD, M.D., Myddleton-square.

1849 THOMAS BALLARD, Southwick-place, Hyde-park.

1837 WILLIAM BALY, M.D. F.R.S., Assistant-Physician to St. Bartholomew's Hospital; Physician to the Milbank Prison; and Lecturer on Forensic Medicine at St. Bartholomew's Hospital; Queen Anne-street, Cavendish-square. C. 1845. L. 1847. S. 1848.

1847 Andrew Whyte Barclay, M.D., Physician to the Chelsea Dispensary; Bruton-street, Berkeley-square.

1848 EDGAR BARKER, Edgeware-road, Hyde-park.

1833 THOMAS ALFRED BARKER, M.D., Vice-President; Physician to, and Lecturer on Medicine at, St. Thomas's Hospital; Grosvenor-street, Grosvenor-square. C. 1844.

1843 THOMAS HERBERT BARKER, Priory-terrace, Bedford.

1847 GEORGE HILARO BARLOW, M.D., Physician to Guy's Hospital; Union-street, Southwark.

1840 BENJAMIN BARROW, Ryde, Isle of Wight.

1844 WILLIAM RICHARD BASHAM, M.D., Secretary; Physician to, and Lecturer on Medicine at, the Westminster Hospital; Chester-street, Grosvenor-place.

1841 GEORGE BEAMAN, King-street, Covent-garden.

1836 WILLIAM BEAUMONT, Professor of Surgery in the University of King's College; Toronto, Upper Canada.

1840 Charles Beevor, 41, Upper Harley-street.

1819 THOMAS BELL, F.R.S. L.S. and G.S., Vice-President; Professor of Zoology in King's College, London; Lecturer on Diseases of the Teeth at Guy's Hospital; and President of the Linnean Society; New Broad-street, City. C. 1832.

1847 James Henry Bennet, M.D., Grosvenor-street.

1845 Edwin Unwin Berry, James-street, Covent-garden.

1820 STEPHEN BERTIN, Paris.

1827 WILLIAM BIRCH, Barton, Lichfield.

- 1845 GOLDING BIRD, M.D. F.R.S., Tunbridge Wells.
- 1850 James Bird, M.D., Hyde-park-square, Hyde-park.
- 1849 EDMUND LLOYD BIRKETT, M.D., Russell-square.
- 1851 GEORGE BIRKETT, M.D., 9, Duncan-terrace, Islington.
- 1851 JOHN BIRKETT, Surgeon to, and Lecturer on Anatomy at, Guy's Hospital; 6, Wellington-street, Southwark.
- 1846 Hugh Birt, 12, Abbey-road, St. John's-wood; Surgeon to the Morro Velhio Hospital.
- 1843 PATRICK BLACK, M.D., Assistant-Physician to St. Bartholomew's Hospital, and Warden to the Collegiate Establishment at St. Bartholomew's Hospital.
- 1844 THOMAS BLACKALL, M.D., Physician to the Seamen's Hospital Ship 'Dreadnought;' Queen-street, May-fair.
- 1847 GEORGE C. BLACKMAN, M.D., New York, U.S.
- 1839 RICHARD BLAGDEN, Surgeon-Accoucheur, and Surgeon Extraordinary to the Queen, Surgeon in Ordinary to Her Royal Highness the Duchess of Kent; 7, Percy-place, Walcot-Bath. C. 1847.
- 1840 PEYTON BLAKISTON, M.D. F.R.S., St. Leonards-on-Sea.
- 1845 HENRY BLENKINSOP, Warwick.
- 1823 LOUIS HENRY BOJANUS, M.D., Wilna.
- 1816 Hugh Bone, M.D., Inspector-Gen. of Hospitals; Edinburgh.
- 1810 JOHN KAYE BOOTH, M.D., Brush-house, near Sheffield.
- 1846 Peter Bossey, Thomas-street, Woolwich.
- 1846 John Ashton Bostock, 34, Clarges-street, Piceadilly.
- 1849 EDWARD BARONS BOWMAN, M.D., Oxford-terrace, Middleton-road, Dalston.
- 1841 WILLIAM BOWMAN, F.R.S., Professor of Physiology and General Anatomy at King's College, London; Assistant-Surgeon to King's College Hospital, and to the Royal Ophthalmie Hospital, Moorfields; Clifford-street, Bondstreet. C. 1852-3.
- 1814 RICHARD BRIGHT, M.D. F.R.S., Physician Extraordinary to the Queen, and Consulting Physician to Guy's Hospital; Savile-row, Regent-street. C. 1821. V.P. 1827. P. 1837.
- 1851 Bernard Edward Brodhurst, Assistant-Surgeon to the Royal Orthopædic Hospital; Brook-street, Grosvenorsquare.

1813 SIR BENJAMIN COLLINS BRODIE, Bart., D.C.L. F.R.S., Serjeant-Surgeon to the Queen, Surgeon in Ordinary to His Royal Highness Prince Albert, Foreign Correspondent of the Institute of France, and Foreign Associate of the Royal Academy of Medicine of Paris; Savile-row, Regent-street. C. 1814. V.P. 1816. P. 1839.

1844 CHARLES BROOKE, B.A. (Cantab.) F.R.S., Surgeon to, and Lecturer on Surgery at, the Westminster Hospital;

Keppel-street, Russell-square.

1848 WILLIAM PHILPOT BROOKES, M.D., Surgeon to the Cheltenham General Hospital and Dispensary, and Visiting Medical Officer to the Cheltenham District of Lunatic Asylums; Albion house, Cheltenham.

1842 CHARLES BLAKELY BROWN, M.B., Physician to Queen Charlotte's Lying-in Hospital, and St. George's and St. James's Dispensary; Hill-street, Berkeley-square.

1847 GEORGE BROWN, Grenadier Guards' Hospital, Rochesterrow, Westminster.

- 1854 *Henry Brown, Surgeon to H.M. the Queen, H.R.H. Prince Albert, and to the Royal Household; Windsor.
- 1847 *Robert Brown, Winckley-square, Preston, Lancashire.
- 1851 ALEXANDER BROWNE, M.D., Army and Navy Club, St. James's-square.
- 1827 M. PIERRE BRULATOUR, Surgeon to the Hospital; Bordeaux.
- 1823 B. BARTLET BUCHANAN, M.D.
- 1843 John Charles Bucknill, M.B., Axminster, Devonshire.
- 1839 George Budd, M.D. F.R.S., Fellow of Caius College, Cambridge; Professor of Medicine in King's College, London; Physician to King's College Hospital; Doverstreet, Piccadilly. C. 1846.
- 1839 THOMAS HENRY BURGESS, M.D., Half-moon-street, Piccadilly.
- 1853 PATRICK BURKE, 13, Upper Montague-street, Montague-sq.
- 1820 SAMUEL BURROWS.
- 1854 PHILIP BURROWES, 22, Royal-crescent, Notting-hill.
- 1833 George Burrows, M.D. F.R.S., Physician to, and Lecturer on Medicine at, St. Bartholomew's Hospital; Cavendish-square. C. 1839. T. 1845. V.P. 1849.
- 1837 George Busk, F.R.S., Surgeon to the Seamen's Hospital Ship 'Dreadnought;' Croom's-hill, Greenwich. C. 1847.

- 1850 JOHN STEVENSON BUSHNAN, M.D., 49, Salisbury-square.
- 1818 JOHN BUTTER, M.D. F.R.S. F.L.S., Physician to the Plymouth Eye Infirmary; Plymouth.
- 1851 *WILLIAM CADGE, All Saints, Norwich.
- 1851 THOMAS CALLAWAY, Assistant-Surgeon and Demonstrator of Anatomy at Guy's Hospital; Wellington-street, Southwark.
- 1852 *George Canney, Bishop's Auckland, Durham.
- 1842 HENRY CANTIS, 14, Hanover-street, Hanover-square.
- 1847 JOHN BURFORD CARLILL, M.D., Berners-street, Oxford-street.
- 1839 SIR ROBERT CARSWELL, M.D., Physician to his Majesty the King of the Belgians; Brussels.
- 1825 HARRY CARTER, M.D., Physician to the Kent and Canterbury Hospital; Canterbury.
- 1853 ROBERT BRUDENELL CARTER, 11, Terrace, Putney.
- 1818 *RICHARD CARTWRIGHT, Pear Tree-cottage, Winwick, Warrington, Lancashire.
- 1820 Samuel Cartwright, F.R.S., Nizell's-house, near Tonbridge.
- 1845 SAMUEL CARTWRIGHT, Jun., Old Burlington-street.
- 1839 WILLIAM CATHROW, Weymouth-street, Portland-place.
- 1845 WILLIAM OLIVER CHALK, Nottingham-terrace, New-road.
- 1818 RICHARD CHAMBERLAINE, Kingston, Jamaica.
- 1844 THOMAS KING CHAMBERS, M.D., Physician to St. Mary's Hospital; Hill-street, Berkeley-square.
- 1816 *WILLIAM FREDERICK CHAMBERS, M.D. K.C.H. F.R.S., Hardle-house, near Lymington, Hants. C. 1818. V.P. 1821. P. 1845.
- 1849 FREDERICK CHAPMAN, Richmond-green, Richmond, Surrey.
- 1837 HENRY THOMAS CHAPMAN, Lower Seymour-street, Portman-square.
- 1838 GEORGE CHAPLIN CHILD, M.D., Consulting Physician to the Westminster General Dispensary; Queen Annestreet, Cavendish-square. C. 1853.
- 1852 GEORGE BORLASE CHILDS, Finsbury-place South, Finsbury-square.
- 1849 WILLIAM FRANCIS CHORLEY, M.D., Physician to the St.
 Marylchone Dispensary; Stratford-place, Oxfordstreet.

- 1842 WILLIAM DINGLE CHOWNE, M.D., Physician to the Charing-cross Hospital; Connaught-place West, Hyde-park. C. 1853.
- 1839 FREDERICK LE GROS CLARK, Surgeon to, and Lecturer on Descriptive and Surgical Anatomy at, St. Thomas's Hospital; Consulting Surgeon to the Western General Dispensary; Spring-gardens. S. 1847.
- 1827 SIR JAMES CLARK, Bart., M.D. F.R.S., Physician to the Queen, Physician in Ordinary to his Royal Highness Prince Albert, and Consulting Physician to his Majesty the King of the Belgians; Brook-street, Grosvenorsquare. C. 1830. V.P. 1832.
- 1845 JOHN CLARK, M.D., Staff Surgeon, 1st class; West Indies.
- 1848 JOHN CLARKE, M.D., Physician to the British Lying-in Hospital; 42, Hertford-street, May-fair.
- 1850 JOSIAH CLARKSON, Birmingham.
- 1842 OSCAR MOORE PASSEY CLAYTON, Percy-street, Bedford-square.
- 1853 Joseph T. Clover, Mortimer-street, Cavendish-square.
- 1851 EDWARD Cock, Surgeon to Guy's Hospital; St. Thomas's-street, Southwark.
- 1850 Daniel Whitaker Cohen, M.D., Cleveland-row, St. James's.
- 1835 *WILLIAM COLBORNE, Chippenham, Wiltshire.
- 1818 ROBERT COLE, F.L.S., Holybourne, Hampshire.
- 1828 JOHN CONOLLY, M.D. D.C.L., Hanwell, Middlesex.
- 1840 *WILLIAM ROBERT COOKE, Burford, Oxfordshire.
- 1820 BENJAMIN COOPER, Stamford.
- 1819 GEORGE COOPER, Brentford, Middlesex.
- 1841 GEORGE LEWIS COOPER, Surgeon to the Bloomsbury Dispensary; Woburn-place, Russell-square.
- 1843 WILLIAM WHITE COOPER, Senior Surgeon to the North London Eye Infirmary, to the Honorable Artillery Company, and Ophthalmic Surgeon to St. Mary's Hospital; Berkeley-square.
- 1854 CHARLES THOMAS COOTE, M.D., Radcliffe Travelling Fellow.
- 1841 Holmes Coote, Secretary; Assistant-Surgeon to St. Bartholomew's Hospital; Demonstrator of Anatomy at St. Bartholomew's Hospital; Queen-square, Bloomsbury.

- 1835 GEORGE FORD COPLAND, Cheltenham.
- 1822 James Copland, M.D. F.R.S., *President;* Consulting Physician to Queen Charlotte's Lying-in Hospital; Old Burlington-street. C. 1830. V.P. 1838.
- 1847 JOHN ROSE CORMACK, M.D., Putney, Surrey.
- 1839 *CHARLES CÆSAR CORSELLIS, M.D., Resident Physician to the Lunatic Asylum, Wakefield, Yorkshire.
- 1853 WILLIAM GILLETT CORY, M.D., Sutton, Surrey.
- 1847 RICHARD PAYNE COTTON, M.D., Assistant-Physician to the Hospital for Consumption and Diseases of the Chest; 46, Clarges-street, Piccadilly.
- 1828 WILLIAM COULSON, Surgeon to the Magdalen Hospital, Consulting Surgeon to the City Lying-in Hospital, and Senior Surgeon to St. Mary's Hospital; Frederick's-place, Old Jewry. C. 1831. L. 1832. V.P. 1851.
- 1817 *SIR PHILIP CRAMPTON, Bart., F.R.S., Surgeon-General to the Forces in Ireland; Dublin.
- 1841 MERVYN ARCHDALL NOTT CRAWFORD, M.D., Physician to, and Lecturer on Medicine at, the Middlesex Hospital; Upper Berkeley-street, Portman-square. C. 1853.
- 1822 SIR ALEXANDER CRICHTON, M.D. F.R.S. and F.L.S.,
 Physician in Ordinary to their Imperial Majesties the
 Emperor and Dowager Empress of all the Russias; the
 Grove, Sevenoaks, Kent. C. 1823.
- 1847 George Critchett, Assistant-Surgeon to the London Hospital, and the Royal London Ophthalmic Hospital; Finsbury-square.
- 1837 JOHN FARRAR CROOKES, Russell-square.
- 1849 *WILLIAM EDWARD CROWFOOT, Beceles, Suffolk.
- 1851 James Cameron Cumming, M.D., 1, Cadogan-place, Sloane-street.
- 1818 WILLIAM CUMING, M.D., Professor of Botany at the Glasgow Institution, and Surgeon to the Royal Infirmary at Glasgow.
- 1846 HENRY CURLING, Surgeon to the Royal Sea Bathing Infirmary; Romsgate, Kent.

- 1837 THOMAS BLIZARD CURLING, F.R.S., Treasurer; Surgeon to, and Lecturer on Surgery at, the London Hospital; New Broad-street, City. S. 1845. C. 1850.
- 1847 JOHN EDMUND CURREY, M.D., Lismore, Ireland.
- 1836 George Cursham, M.D., Physician to the Hospital for Consumption and Diseases of the Chest, and to the Female Orphan Asylum; Savile-row, Regent-street. S. 1842. C. 1850.
- 1822 CHRISTOPHER JOHN CUSACK, Chateau d'Eu, France.
- 1852 THOMAS CUTLER, M.D., Physician to the Spa General Dispensary; Spa, Belgium.
- 1828 ADOLPHE DALMAS, M.D., Paris.
- 1851 NATHANIEL JOHN DAMPIER, Surgeon to the Farringdon General Dispensary and Lying-in Charity; Woburnplace, Russell-square.
- 1836 *JAMES STOCK DANIEL, Ramsgate.
- 1850 JOHN BAMPFYLDE DANIELL, M.D., Physician to the Royal Pimlico Dispensary; Grosvenor-street, Grosvenor-square.
- 1820 George Darling, M.D., Russell-square. C. 1841.
- 1818 *SIR FRANCIS SACHEVEREL DARWIN, Knt., M.D., Breadsall Priory, near Derby.
- 1848 HENRY DAUBENY, 34A, York-street, Gloucester-place.
- 1846 FREDERICK DAVIES, Surgeon to the Northern Dispensary; Upper Gower-street, Bedford-square.
- 1818 *Henry Davies, M.D., 6, Duchess-street, Portland-place. C. 1827. V.P. 1848.
- 1847 John Davies, M.D., Physician to the Hertford Infirmary, and Visiting Physician to the County Gaol and Lunatic Asylum, Hertford.
- 1853 ROBERT COKE NASH DAVIES, Winchelsea, Sussex.
- 1852 WILLIAM DAVIES, M.D., Senior Physician to the United Hospital, Bath; Gay-street, Bath.
- 1852 JOHN HALL DAVIS, M.D., Russell-place, Fitzroy-square.
- 1820 THOMAS DAVIS, Spring-gardens. C. 1843.
- 1818 JAMES DAWSON, Liverpool.
- 1847 GEORGE EDWARD DAY, M.D. F.R.S., Chandos Professor of Medicine, St. Andrew's.

- 1841 CAMPBELL DE MORGAN, Surgeon to, and Lecturer on Physiology at, the Middlesex Hospital; Upper Seymourstreet, Portman-square. S. 1851-2.
- 1846 *Samuel Best Denton, Ivy-lodge, Hornsea, East Riding, Yorkshire.
- 1844 ROBERT DICKSON, M.D., Hertford-street, May-fair.
- 1839 James Dixon, Librarian; Surgeon to the Royal London Ophthalmic Hospital; Green-street, Park-lane.
- 1845 JOHN DODD, 6, Upper Seymour-street, Portman-square.
- 1853 ROBERT DRUITT, M.D., Curzon-street, May-fair.
- 1846 JOHN DRUMMOND, Deputy-Inspector of Fleets and Hospitals; Royal Naval Hospital, Chatham.
- 1843 THOMAS JONES DRURY, M.D., Physician to the Salop Infirmary; Shrewsbury.
- 1845 GEORGE DUFF, M.D., Prospect-lodge, Elgin.
- 1845 EDWARD WILLSON DUFFIN, Langham-place, Portland-place.
- 1833 ROBERT DUNN, Norfolk-street, Strand. C. 1845.
- 1843 Christopher Mercer Durrant, M.D., Physician to the East Suffolk and Ipswich Hospital; Ipswich, Suffolk.
- 1839 HENRY SUMNER DYER, M.D., Bryanston-square. C. 1854.
- 1836 JAMES WILLIAM EARLE, Norwich.
- 1853 *George Edwardes, Wolverhampton.
- 1824 GEORGE EDWARDS.
- 1823 CHARLES CHANDLER EGERTON, Kendall-lodge, Epping.
- 1848 George Viner Ellis, Professor of Anatomy in University College, London.
- 1854 *JAMES ELLISON, M.D., Windsor.
- 1835 WILLIAM ENGLAND, M.D., Wisbeach, Cambridgeshire.
- 1812 John Eric Erichsen, Professor of Surgery in University College, London, and Surgeon to University College Hospital; Welbeck-street, Cavendish-square.
- 4815 *GRIFFITH FRANCIS DORSETT EVANS, M.D., High-street, Bedford. C. 1838.
- 1836 GEORGE FABIAN EVANS, M.D., Physician to the General Hospital, Birmingham.
- 1845 WILLIAM JULIAN EVANS, M.D.
- 1841 SIR James Eyre, M.D., Consulting Physician to St. George's and St. James's Dispensary; Brook-street, Grosvenor-square. C. 1851.

- 1844 ARTHUR FARRE, M.D. F.R.S., Professor of Midwifery in King's College, London; Hertford-street, May-fair.
- 1831 ROBERT FERGUSON, M.D., Physician-Accoucheur to the Queen, Physician to the Westminster Lying-in Hospital; Park-street, Grosvenor-square. C. 1839. V.P. 1847.
- 1841 WILLIAM FERGUSSON, F.R.S., Professor of Surgery in King's College, London; Surgeon to King's College Hospital, and to H.R.H. Prince Albert; George-street, Hanoversquare. C. 1849.
- 1852 Alfred George Field, 46, Great Marlborough-street.
- 1850 *FREDERICK FIELD, Birmingham.
- 1849 GEORGE TUPMAN FINCHAM, M.D., Assistant-Physician to, and Lecturer on Forensic Medicine at, the Westminster Hospital, and Physician to the Western Dispensary; 28, Chapel-street, Belgrave square.
- 1836 JOHN WILLIAM FISHER, Surgeon-in-Chief to the Metropolitan Police Force; Grosvenor-gate. C. 1843.
- 1838 GEORGE LIONEL FITZMAURICE, Gloncester-place, Portman-square.
- 1842 THOMAS BELL ELCOCK FLETCHER, M.D., Physician to the General Hospital, Birmingham.
- 1841 SIR JOHN FORBES, M.D. F.R.S. D.C.L., Knt., Physician to her Majesty's Household; Old Burlington-street. C. 1852.
- 1848 John Gregory Forbes, Surgeon to the Western General Dispensary; Devonport-street, Hyde-park.
- 1852 JOHN COOPER FORSTER, Surgeon to the Surrey Dispensary; Wellington-street, Southwark.
- 1817 *ROBERT THOMAS FORSTER, Southwell, Notts.
- 1820 THOMAS FORSTER, M.D., Hartfield-lodge, East Grinstead.
- 1816 JOHN W. FRANCIS, M.D., Professor of Materia Medica in the University of New York, U.S.
- 1841 JOHN CHRISTOPHER AUGUST. FRANZ, M.D., Royal German Spa, Brighton.
- 1843 PATRICK FRASER, M.D., Physician to the London Hospital; Guildford street, Russell-square.
- 1836 John George French, Surgeon to St. James's Infirmary; Great Marlborough-street, Regent-street. C. 1852-3.

- 1849 ROBERT TEMPLE FRERE, M.D., Physician-Accoucheur to, and Lecturer on Midwifery at, the Middlesex Hospital; Queen-street, May-fair.
- 1846 HENRY WILLIAM FULLER, M.D., Assistant-Physician to, and Lecturer on Medical Jurisprudence at, St. George's Hospital; Manchester-square.
- 1815 *George Frederick Furnival, Egham, Surrey.
- 1854 Alfred Baring Garron, M.D., Professor of Materia Medica and Therapeutics, University College, and Physician to University College Hospital; 63, Harley-street, Cavendish-square.
- 1851 GEORGE GASKOIN, Cambridge-terrace, Hyde-park.
- 1819 JOHN SAMUEL GASKOIN, Clarges-street, Piccadilly. C. 1836.
- 1819 HENRY GAULTER.
- 1848 JOHN GAY, Finsbury-place, Finsbury-square. .
- 1821 *RICHARD FRANCIS GEORGE, Surgeon to the Bath Hospital.
- 1854 BERNARD GILPIN, Belle Vue-house, Ulverstone, Lancashire.
- 1851 STEPHEN JENNINGS GOODFELLOW, M.D., Assistant-Physician to, and Lecturer on Forensic Medicine at, the Middlesex Hospital; Russell-square.
- 1818 James Alexander Gordon, M.D. F.R.S., Burford-lodge, Box-hill. C. 1828. V.P. 1829.
- 1851 PETER YEAMES GOWLLAND, Finsbury-square.
- 1844 John Grantham, Crayford, Kent.
- 1850 HENRY GRAY, F.R.S., Surgeon to the St. George's and St. James's Dispensary; Wilton-street, Grosvenor-place.
- 1846 GEORGE THOMPSON GREAM, M.D., 2, Upper Brook-street, Grosvenor-square.
- 1816 Joseph Henry Green, F.R.S., Consulting Surgeon to St. Thomas's Hospital; Hadley, Middlesex. C. 1820. V.P. 1830.
- 1843 ROBERT GREENHALGH, M.D., Surgeon-Accoucheur to the Royal General Dispensary, St. Pancras; 11, Upper Woburn-place, Russell-square.
- 1814 JOHN GROVE, M.D., Salisbury.
- 1852 John Grove, Wandsworth, Surrey.
- 1849 WILLIAM WITHEY GULL, M.D., Assistant-Physician to Guy's Hospital; Finsbury-square.
- 1837 JAMES MANRY GULLY, M.D., Holyrood-house, Great Malvern.

- 1819 SIR JOHN GUNNING, Knight, C.B., Inspector of Hospitals;
 Paris
- 1842 CHARLES WILLIAM GARDINER GUTHRIE, Surgeon to, and Lecturer on Surgery at, the Westminster Hospital, and to the Westminster Ophthalmic Hospital; Pall Mall East.
- 1854 SAMUEL OSBORNE HABERSHON, M.D., Demonstrator of Morbid Anatomy, and Curator of the Museum, at Guy's Hospital; Physician to the City Dispensary; 48, Finsbury-circus, Finsbury-square.
- 1849 HAMMETT HAILEY, Newport Pagnell, Bucks.
- 1852 ROBERT JAMES HALE, M.D., 17, Westbourne-terrace, Hydepark.
- 1842 *George Hale, M.D.
- 1845 JOHN HALL, M.D., Deputy-Inspector-General of Hospitals; Cape of Good Hope.
- 1848 ALEXANDER HALLEY, M.D., Queen Anne-street, Cavendish-square.
- 1819 THOMAS HAMMERTON, Piccadilly. C. 1829.
- 1838 Henry Hancock, Surgeon to the Charing-cross Hospital; Harley-street, Cavendish-square. C. 1851.
- 1849 *RICHARD JAMES HANSARD, Broad-street, Oxford.
- 1848 *GEORGE HARCOURT, M.D., Chertsey, Surrey.
- 1836 JOHN FOSSE HARDING, Mylne-street, Myddleton-square.
- 1843 THOMAS SUNDERLAND HARRISON, M.D. F.L.S., Garstonlodge, Somersetshire.
- 1846 John Harrison, the Court-yard, Albany.
- 1841 WILLIAM HARVEY, Surgeon to the Royal Dispensary for Diseases of the Ear, and to the Freemasons' Female Charity; Soho-square. C. 1854.
- 1853 ARTHUR HILL HASSALL, M.D., Physician to the Royal Free Hospital; 8, Bennett-street, St. James's.
- 1828 C.ESAR HENRY HAWKINS, President of the Royal College of Surgeons of England; Senior Surgeon to St. George's Hospital; Grosvenor-street, Grosvenor-square. C. 1830. V.P. 1838. T. 1841.
- 1838 CHARLES HAWKINS, Savile-row, Regent-street. C. 1846. S. 1850.
- 1848 THOMAS HAWKSLEY, M.D., George-street, Hanover-square.
- 1820 Thomas Emerson Headlam, M.D., Newcastle-upon-Tyne.

- 1848 *James Newton Heale, M.D., Physician to the Winchester County Hospital; Winchester.
- 1850 GEORGE HEATON, M.D., Boston, U.S.
- 1829 THOMAS HEBERDEN, M.D., Park-street, Grosvenor-square.
- 1844 John Hennen, M.D., Physician to the Western General Dispensary; Upper Southwick-street, Hyde-park. L. 1848.
- 1848 MITCHELL HENRY, Assistant-Surgeon to the Middlesex Hospital; Harley-street, Cavendish-square.
- 1849 Amos Henriques, Upper Berkeley-street, Portman-square.
- 1821 VINCENT HERBERSKI, M.D., Professor of Medicine in the University of Wilna.
- 1843 PRESCOTT GARDNER HEWETT, Assistant-Surgeon to the St. George's Hospital, Lecturer on Anatomy at St. George's Hospital Medical School; Hertford-street, May-fair.
- 1853 THOMAS HEWLETT, Surgeon to Harrow School; Harrow.
- 1841 *NATHANIEL HIGHMORE, Consulting-Surgeon to the Weymouth and Dorsetshire Eye Infirmary; Sherborne, Dorsetshire.
- 1814 *WILLIAM HILL, Wootton-under-Edge, Gloucestershire.
- 1854 THOMAS HILLIER, B.A. (Lond.), Resident Medical Officer in University College Hospital.
- 1842 WILLIAM AUGUSTUS HILLMAN, Assistant-Surgeon to, and Lecturer on Anatomy and Physiology at, Westminster Hospital; Argyll-street, Regent-street.
- 1841 JOHN HILTON, F.R.S., Surgeon to, and Lecturer on Anatomy at, Gny's Hospital; New Broad-street, City. C. 1851.
- 1848 MARTIN THOMAS HISCOX, M.D., Bath, Somersetshire.
- 1840 THOMAS HODGKIN, M.D., Bedford-square. C. 1842.
- 1813 Joseph Hodgson, F.R.S., Westbourne-terrace, Hyde-park. C. 1817. P. 1851.
- 1835 THOMAS HENRY HOLBERTON, Hampton, Middlesex.
- 1843 LUTHER HOLDEN, 54, Gower-street, Bedford-square.
- 1814 SIR HENRY HOLLAND. Bart., M.D. F.R.S., Physician to the Queen, and Physician in Ordinary to H.R.H. Prince Albert; Brook-street, Grosvenor-square. C. 1817. V.P. 1826.
- 1846 BARNARD WIGHT HOLT, Surgeon to the Westminster Hospital; Parliament-street, Westminster.

- 1846 Carsten H. Holthouse, Surgeon to the Public Dispensary, Lineoln's Inn; Assistant-Surgeon to, and Lecturer on Anatomy and Physiology at, the Westminster Hospital; 9, New Burlington-street.
- 1853 WILLIAM CHARLES HOOD, M.D., Medical Superintendent, Bethlem Hospital.
- 1819 *John Howell, M.D. F.R.S.E., Deputy-Inspector-General of Military Hospitals; Honorary and Consulting Physician to the Bristol Royal Infirmary; Datchet, near Windsor.
- 1828 *EDWARD HOWELL, M.D., Swansea, Glamorganshire.
- 1844 EDWIN HUMBY, Windsor-terrace, Maida-hill.
- 1822 ROBERT HUME, M.D. C.B., Inspector of Hospitals; Commissioner in Lunacy; Curzon-street, May-fair. V.P. 1836.
- 1840 HENRY HUNT, M.D., Brook-street, Hanover-square.
- 1842 CHRISTOPHER HUNTER, Downham, Norfolk.
- 1849 EDWARD LAW HUSSEY, Surgeon to the Radcliffe Infirmary, Oxford.
- 1820 WILLIAM HUTCHINSON, M.D.
- 1840 CHARLES HUTTON, M.D., Physician to the Royal Infirmary for Children; Assistant-Physician to the General Lying-in Hospital; Lowndes-street, Belgrave-square.
- 1838 WILLIAM IFIL, M.D.
- 1847 WILLIAM EDMUND IMAGE, Surgeon to the Suffolk General Hospital; Bury St. Edmund's, Suffolk.
- 1826 WILLIAM INGRAM, Midhurst, Sussex.
- 1839 Alexander Russell Jackson, M.D., Warley Barracks, Essex.
- 1845 *Henry Jackson, Surgeon to the Sheffield General Infirmary; St. James's-row, Sheffield.
- 1841 PAUL JACKSON, Bentinck-street, Manchester-square.
- 1847 THOMAS REYNOLDS JACKSON, Charles-street, St. James's.
- 1841 MAXIMILIAN MORITY JACOBOVICZ, M.D., Pesth.
- 1825 JOHN B. JAMES, M.D.
- 1847 *WILLIAM WITHALL JAMES, Exeter, Devonshire.
- 1844 SAMUEL JOHN JEAFFRESON, M.D., Leamington, Warwickshire.
- 1839 Julius Jeffreys, F.R.S., Bath, Somersetshire.

- 1840 *George Samuel Jenks, M.D., Physician to the Sussex County Hospital; Brighton.
- 1851 WILLIAM JENNER, M.D., Professor of Pathological Anatomy in University College, and Assistant-Physician to University College Hospital; Harley-street, Cavendish-square.
- 1848 ATHOL ARCHIBALD WOOD JOHNSON, Lecturer on Physiology at St. George's Hospital Medical School, and Surgeon to the Hospital for Sick Children; 37, Albemarle-street.
- 1851 EDMUND CHARLES JOHNSON, M.D., Savile-row, and Arlington-street, Piccadilly.
- 1821 SIR EDWARD JOHNSON, M.D., Weymouth, Dorsetshire.
- 1847 George Johnson, M.D., Assistant-Physician to King's College Hospital; Woburn-square.
- 1837 HENRY CHARLES JOHNSON, Surgeon to, and Lecturer on Medical Jurisprudence at, St. George's Hospital; Savile-row, Regent-street. C. 1850.
- 1844 JOHN JOHNSTON, Old Burlington-street.
- 1853 HENRY JONES, Soho-square.
- 1844 HENRY BENCE JONES, M.D. F.R.S., Physician to St. George's Hospital; Grosvenor-street, Grosvenor-square.
- 1835 HENRY DERVICHE JONES, Soho-square. C. 1854.
- 1853 THOMAS WHARTON JONES, F.R.S., 35, George-street, Hanover-square.
- 1837 THOMAS WILLIAM JONES, M.D., Physician to the City Dispensary; Finsbury-pavement, Finsbury-square.
- 1829 *George Charles Julius, Richmond, Surrey.
- 1816 *GEORGE HERMANN KAUFFMANN, M.D., Hanover.
- 1815 ROBERT KEATE, Serjeant-Surgeon to the Queen, Surgeon to II.R.H. the Duchess of Gloucester; Hertford-street, May-fair. C. 1818. V.P. 1826.
- 1848 *Daniel Burton Kendell, M.D., St. John's, Wakefield, Yorkshire.
- 1847 ALFRED KEYSER, Norfolk-crescent, Oxford-square.
- 1839 *DAVID KING, M.D., Eltham, Kent.
- 1851 JOHN ABERNETHY KINGDON, New Bank-buildings, City.
- 1840 SAMUEL ARMSTRONG LANE, Lecturer on Anatomy; Surgeon to the Lock Hospital, and to St. Mary's Hospital; Grosvenor-place, Hyde-park. C. 1849.

- 1841 *CHARLES LASHMAR, M.D., Croydon, Surrey.
- 1816 G. E. LAWRENCE.
- 1809 WILLIAM LAWRENCE, F.R.S., Surgeon Extraordinary to the Queen; Surgeon to St. Bartholomew's Hospital, and to Bridewell and Bethlem Hospital; Lecturer on Surgery at St. Bartholomew's Hospital; Whitehallplace, Whitehall. S. 1813. V.P. 1818. C. 1820. T. 1821. P. 1831.
- 1840 THOMAS LAYCOCK, M.D., York.
- 1843 *JESSE LEACH, Heywood, near Bury, Lancashire.
- 1823 John G Leath, M.D.
- 1822 JOHN JOSEPH LEDSAM, M.D.
- 1822 ROBERT LEE, M.D. F.R.S., Physician to the British Lyingin Hospital; Physician-Accoucheur to the St. Marylebone Infirmary; and Lecturer on Midwifery at St. George's Hospital; Savile-row, Regent-street. C. 1829. S. 1830. V.P. 1835.
- 1843 HENRY LEE, M.D., Keppel-street, Russell-square. C. 1837. S. 1839.
- 1843 HENRY LEE, Assistant-Surgeon to King's College Hospital, and Surgeon to the Lock Hospital; Dover-street, Piccadilly.
- 1851 GEORGE MACARTNEY LEESE, Gloucester-place, Portman-square.
- 1836 FREDERICK LEIGHTON, M.D., Frankfort-on-the-Maine.
- 1854 HANANEL DE LEON, M.D., 4, Gordon-street, Gordon-square.
- 1847 JOHN CHARLES WEAVER LEVER, M.D., Physician-Accoucheur to Guy's Hospital; Wellington-street, Southwark.
- 1847 SIR JOHN LIDDELL, M.D. F.R.S. C.B., Inspector of Hospitals; Royal Hospital, Greenwich.
- 1806 JOHN LIND, M.D.
- 1845 WILLIAM JOHN LITTLE, M.D., Physician to, and Lecturer on Medicine at, the London Hospital; 34, Brook-street, Grosvenor-square.
- 1819 ROBERT LLOYD, M.D.
- 1824 Eusebius Arthur Lloyd, Surgeon to St. Bartholomew's and Christ's Hospitals; Bedford-row. S. 1827. V.P. 1838. C. 1843.

- 1820 J. G. LOCHER, M.C.D., Town Physician of Zurich.
- 1844 EDWARD FRANCIS LONSDALE, Surgeon to the Royal Orthopædic Hospital; Montague-street, Russell-square.
- 1824 CHARLES LOCOCK, M.D., First Physician-Accoucheur to the Queen, and Consulting Physician to the General Lying-in Hospital; Hertford-street, May-fair. C. 1826. V.P. 1841.
- 1852 CHARLES LODGE, M.D.
- 1846 HENRY THOMAS LOMAX, Stafford.
- 1836 JOSEPH S. LÖWENFELD, M.D., Berbice.
- 1815 *PETER LUARD, M.D.
- 1852 James Luke, Senior-Surgeon to the London Hospital; Vice-President of the Royal College of Surgeons of England; Broad-street-buildings.
- 1846 WILLIAM M'EWEN, M.D., Surgeon to the Cheshire County Gaol, and House-Surgeon to the Chester General Infirmary; Newgate-street, Chester.
- 1814 SIR JAMES MACGRIGOR, Bart., M.D. K.C.B. K.T.S. LL.D. F.R.S. L. and E., Director-General of the Medical Department of the Army; Harley-street, Cavendish-square. C. 1820. V.P. 1815.
- 1823 George Macilwain, Consulting Surgeon to the Finsbury Dispensary; the Court-yard, Albany. C. 1829. V.P. 1848.
- 1839 WILLIAM MACINTYRE, M.D., Harley-street, Cavendish-square. C. 1850.
- 1848 FREDERICK WILLIAM MACKENZIE, M.D., Chester-place, Hyde-park-square.
- 1818 WILLIAM MACKENZIE, Surgeon to the Eye Infirmary, Glasgow.
- 1854 *DRAPER MACKINDER, M.D., Gainsborough, Lincolnshire.
- 1822 RICHARD MACKINTOSH, M.D.
- 1844 Daniel Maclaciilan, M.D., Physician to the Royal Hospital, Chelsea, and Deputy-Inspector-General of Hospitals; Royal Hospital, Chelsea.
- 1851 SAMUEL MACLEAN, Brook-street, Grosvenor-square.
- 1849 DUNCAN MACLACHLAN MACLURE, Harley-street, Cavendish-square.
- 1842 JOHN MACNAUGHT, M.D., Bedford-street, Liverpool.

- 1835 Daniel Chambers Macreight, M.D., St. Hillier's, Jersey.
- 1837 Andrew Melville M'Whinnie, Assistant-Surgeon to St. Bartholomew's Hospital; Lecturer on Comparative Anatomy at St. Bartholomew's Hospital; Assistant-Surgeon to the London Hospital for Diseases of the Skin; Bridge-street, Blackfriars. C. 1851.
- 1848 WILLIAM ORLANDO MARKHAM, M.D., Assistant-Physician to St. Mary's Hospital; Clarges-street, Piccadilly.
- 1824 SIR HENRY MARSH, Bart., M.D., Dublin.
- 1838 THOMAS PARR MARSH, M.D., Physician to the Salop Infirmary, Shrewsbury.
- 1851 JOHN MARSHALL, Assistant-Surgeon to University College Hospital; 10, George-street, Hanover-square.
- 1841 James Ranald Martin, F.R.S., Lower Grosvenor-street, Grosvenor-square. C. 1853.
- 1849 GEORGE BELLASIS MASFEN, 78, Oxford-street, Manchester.
- 1853 WILLIAM EDWARD MASFEN, Stafford.
- 1818 J. P. MAUNOIR, Professor of Surgery at Geneva.
- 1837 THOMAS MAYO, M.D. F.R.S., Physician to the St. Marylebone Infirmary; Wimpole-street, Cavendish-square. S. 1841. C. 1847. V.P. 1851.
- 1839 RICHARD HENRY MEADE, Bradford, Yorkshire.
- 1819 *THOMAS MEDHURST, Hurstbourne Tarrant, Hampshire.
- 1837 SAMUEL WILLIAM JOHN MERRIMAN, M.D., Physician to the Royal Infirmary for Children; Consulting Physician to the Westminster General Dispensary; and Assistant-Physician to the West London Lying-in Institution; 3, Charles-street, Westbourne-terrace, Hyde-park.
- 1852 James Merryweather, 57, Brook-street, Grosvenor-square.
- 1847 EDWARD MERYON, M.D., Clarges-street, Piceadilly.
- 1815 Augustus Meyer, M.D., St. Petersburgh.
- 1840 RIGHARD MIDDLEMORE, Consulting-Surgeon to the Eye Infirmary, Birmingham.
- 1854 EDWARD ARCHIBALD MIDDLESHIP, Richmond, Surrey.
- 1818 *PATRICK MILLER, M.D. F.R.S. E., Physician to the Devon and Exeter Hospitals, and to the Lunatic Asylum; Exeter, Devonshire.
- 1848 GAVIN MILROY, M.D., 55, Victoria-street, Westminster.

- 1852 James Monro, M.D., Surgeon-Major, Coldstream Guards; Vincent-square, Westminster.
- 1844 NATHANIEL MONTEFIORE, 4, Stanhope-street, May-fair.
- 1828 Joseph Moore, M.D., Treasurer; Physician to the Royal Freemasons' Female Charity; Consulting Physician to Queen Charlotte's Lying-in Hospital; Savile-row, Regent-street. C. 1837.
- 1836 GEORGE MOORE, M.D., Hastings.
- 1848 CHARLES HEWITT MOORE, Surgeon to, and Lecturer on Anatomy at, the Middlesex Hospital; 35, Montagueplace, Russell-square.
- 1854 GEORGE MOSELEY, Sandgate, Kent.
- 1851 FREDERICK JOHN MOUAT, M.D., Professor of Medicine in the Medical College of Calcutta, and Secretary of the Council of Education in India; Calcutta.
- 1814 *George Frederick Muhry, M.D., Hanover.
- 1847 SIMON MURCHISON, Steepleaston, near Woodstock, Oxon.
- 1845 THOMAS D. MUTTER, M.D., Professor of Surgery in Jefferson Medical College; Philadelphia.
- 1840 ROBERT NAIRNE, M.D., Physician to, and Lecturer on Medicine at, St. George's Hospital; Charles-street, Berkeley-square. C. 1848.
- 1835 THOMAS ANDREW NELSON, M.D., Nottingham-terrace, Newroad.
- 1843 EDWARD NEWTON, Howland-street, Fitzroy-square.
- 1851 JAMES NICHOLS, Savile-row, Regent-street.
- 1819 *George Norman, Surgeon to the United Hospital and Puerperal Charity; Bath.
- 1849 HENRY BURFORD NORMAN, Surgeon to the North London Eye Infirmary, and the St. Marylebone Dispensary; Duchess-street, Portland-place.
- 1845 HENRY NORRIS, South Petherton, Somerset.
- 1819 *ARTHUR NOVERRE, Great Stanmore, Middlesex.
- 1847 *WILLIAM EDWARD CHARLES NOURSE.
- 1843 WILLIAM O'CONNOR, M.D., 30, Upper Montague-street, Montague-square.
- 1847 THOMAS O'CONNOR, March, Cambridgeshire.
- 1846 FRANCIS ODLING, Devonshire-street, Portland-place.

- 1822 James Adex Ogle, M.D. F.R.S., Clinical and Aldrichian Professor of Medicine, Oxford; and Senior Physician to the Radcliffe Infirmary; Oxford.
- 1850 HENRY OLDHAM, M.D., Obstetric Physician to Guy's Hospital; Finsbury-square.
- 1842 WILLIAM PIERS ORMEROD.
- 1846 *EDWARD LATHAM ORMEROD, M.D., Physician to the Sussex County Hospital; Old Steyne, Brighton.
- 1847 WILLIAM EMANUEL PAGE, M.D., Physician to, and Lecturer on Medicine at, St. George's Hospital; Curzon-street, May-fair.
- 1847 *WILLIAM BOUSFIELD PAGE, Surgeon to the Cumberland Infirmary; Carlisle.
- 1840 James Paget, F.R.S., Assistant-Surgeon to, and Lecturer on General and Morbid Anatomy and Physiology at, St. Bartholomew's Hospital; Henrietta-street, Cavendish-square. C. 1848.
- 1806 *ROBERT PALEY, M.D., Bishopston-grange, near Ripon, Yorkshire.
- 1836 S. W. Langston Parker, Surgeon to the Queen's Hospital; Birmingham.
- 1847 NICHOLAS PARKER, M.B., Assistant-Physician to the London Hospital: Microscopical Demonstrator of Morbid Anatomy at the London Hospital School of Medicine; Finsbury-square.
- 1841 JOHN PARKIN, M.D., Paris.
- 1851 James Part, 7, Camden-road-villas, Camden-town.
- 1828 RICHARD PARTRIDGE, F.R.S., Surgeon to King's College Hospital, and Professor of Anatomy in King's College, London; New-street, Spring-gardens. S. 1832. C. 1837. V.P. 1847.
- 1845 THOMAS BEVILL PEACOCK, M.D., Assistant Physician to St. Thomas's Hospital; Finsbury-circus, Finsbury-square.
- 1830 CHARLES P. PELECHIN, M.D., St. Petersburgh.
- 1819 John Pryor Peregrine, M.D., Jersey.
- 1839 THOMAS PEREGRINE, M.D., Half Moon-street, Piccadilly.
- 1844 WILLIAM VESALIUS PETTIGREW, M.D., Chester-street, Grosvenor-place.

- 1837 Benjamin Phillips, F.R.S., Brentbridge-house, Hendon, Middlesex. L. 1841. T. 1847.
- 1814 *EDWARD PHILLIPS, M.D., Consulting Physician to the County Hospital; Winchester, Hampshire.
- 1848 EDWARD PHILLIPS, M.D., Coventry, Warwickshire.
- 1852 RICHARD PHILLIPS, 5, Winchester-place, Pentonville.
- 1854 THOMAS BACON PHILLIPS, 24, Powis-square, Brighton.
- 1846 Francis Richard Philp, M.D., Colby-house, Kensington.
- 1851 *James Hollins Pickford, M.D. M.R.I.A., Brighton.
- 1851 JOHN PICTON, M.D.
- 1836 ISAAC PIDDUCK, M.D., Physician to the Bloomsbury Dispensary; Montague-street, Russell-square.
- 1852 GEORGE PILCHER, Harley-street, Cavendish-square.
- 1852 HENRY PILLEAU, 11, Young-street, Kensington-square.
- 1841 HENRY ALFRED PITMAN, M.D., Assistant-Physician to, and Lecturer on Materia Medica at, St. George's Hospital; Montague-place, Russell-square.
- 1850 ALFRED POLAND, Assistant-Surgeon to Guy's Hospital, and to the Royal Ophthalmic Hospital; St. Helen's-place, Bishopsgate-street.
- 1845 George David Pollock, Surgeon to the North London Eye Infirmary; Assistant-Surgeon to, and Lecturer on Anatomy at, St. George's Hospital Medical School; Grosvenor-street, Grosvenor-square.
- 1843 CHARLES POPE, M.D. M.A. F.L.S., Temple Cloud, near Bristol.
- 1846 Jepuson Potter, M.D. F.L.S. M.R.C.S., Oxford-road, Manchester.
- 1840 Lewis Powell, John-street, Berkeley-square.
- 1842 JAMES POWELL, M.B. (Lond.), Guildford-street, Russell-sq.
- 1851 ROBERT FRANCIS POWER, M.D., 14, Waterloo-place.
- 1839 JOHN PROPERT, New Cavendish-street, Portland-place.
- 1845 JOHN PYLE, Surgeon to the North London Eye Infirmary; Oxford-terrace, Hyde-park.
- 1816 SIR WILLIAM PYM, M.D., Inspector of Hospitals.
- 1830 JONES QUAIN, M.D., Paris.
- 1850 RICHARD QUAIN, M.D., Assistant Physician to the Hospital for Consumption; Harley-street, Cavendish-square.

- 1835 RICHARD QUAIN, F.R.S., Surgeon to University College Hospital, and Professor of Clinical Surgery in University College, London; Cavendish-square. C. 1838. L. 1846. T. 1851.
- 1852 CHARLES BLAND RADCLIFFE, M.D., Assistant-Physician to, and Lecturer on Materia Medica at, the Westminster Hospital; Henrietta-street, Cavendish-square.
- 1854 *WILLIAM HENRY RANSOM, M.D., Nottingham.
- 1821 HENRY REEDER, M.D., Ridge-house, Chipping, Sudbury.
- 1835 G. REGNOLI, Professor of Surgery in the University of Pisa.
- 1846 James Reid, M.D., Physician to the Infirmary of St. Giles and Bloomsbury; General Lying-in Hospital, &c.; Brook-street, Grosvenor-square.
- 1847 SAMUEL RICHARDS, M.D., Bedford-square.
- 1853 CHRISTOPHER THOMAS RICHARDSON, M.B., 16, Hinde-street, Manchester-square.
- 1829 SIR JOHN RICHARDSON, Knt., F.R.S. C.B., Surgeon to the Naval Hospital; Haslar Hospital, Gosport.
- 1849 *WILLIAM RICHARDSON, M.D., 9, Ephraim-road, Tunbridge Wells, Kent.
- 1843 Joseph Ridge, M.D., Dorset-square.
- 1845 BENJAMIN RIDGE, M.D., Putney, Surrey.
- 1852 Charles Ridley, Charlotte-street, Bedford-square.
- 1852 John Roberts, M.D., Physician to the Westminster General Dispensary; Bruton-street, Berkeley-square.
- 1829 *ARCHIBALD ROBERTSON, M.D. F.R.S. L. and E., Physician to the General Infirmary, Northampton.
- 1843 George Robinson, M.D., Newcastle-on-Tyne.
- 1843 WILLIAM RODEN, M.D. F.L.S., Kidderminster.
- 1835 GEORGE HAMILTON ROE, M.D., Physician to the Westminster Hospital; Upper Brook-street, Grosvenor-square. C. 1841.
- 1836 ARNOLD ROGERS, Hanover-square.
- 1846 WILLIAM RICHARD ROGERS, M.D., Berners-street, Oxford-street.
- 1819 HENRY SHUCKBURGH ROOTS, M.D., Consulting-Physician to St. Thomas's Hospital; Russell-square. C. 1833. V.P. 1834.
- 1829 *William Sudlow Roots, Kingston, Surrey.

- 1850 GEORGE ROFER, 180, Shoreditch.
- 1836 RICHARD ROSCOE, M.D., Twickenham, Middlesex.
- 1836 *CALEB BURRELL Rose, Swaffham, Norfolk.
- 1850 ARCHIBALD COLQUHOUN Ross, M.D., Madeira.
- 1849 CHARLES HENRY FELIX ROUTH, M.D., 52, Montague-square.
- 1845 Henry Mortimer Rowdon, 29, Nottingham-place, York-gate, Regent's-park.
- 1841 RICHARD ROWLAND, M.D., Assistant-Physician to the Charing-cross Hospital; Woburn-place, Russell-square.
- 1834 HENRY WILLIAM RUMSEY, Cheltenham.
- 1845 James Russell, M.D., Physician to the General Dispensary, Birmingham.
- 1851 HENRY HYDE SALTER, M.B., Montague-street, Russell-sq.
- 1827 *THOMAS SALTER, F.L.S., Poole, Dorsetshire.
- 1844 *THOMAS BELL SALTER, M.D. F.L.S., Ryde, Isle of Wight.
- 1849 HUGH JAMES SANDERSON, M.D., Upper Berkeley-street, Portman-square.
- 1847 WILLIAM HENRY OCTAVIUS SANKEY, M.D., London Fever Hospital, Liverpool-road, Islington.
- 1845 EDWIN SAUNDERS, Surgeon-Dentist to the Queen, and Lecturer on Diseases of the Teeth at St. Thomas's Hospital; George-street, Hanover-square.
- 1834 LUDWIG V. SAUVAN, M.D., Warsaw.
- 1840 Augustin Sayer, M.D., Upper Seymour-street, Portman-square.
- 1853 MAURICE SCHULHOF, M.D., Physician to the Royal General Dispensary, Bartholomew-close; Suffolk place, Pall Mall.
- 1824 EDWARD JAMES SEYMOUR, M.D. F.R.S., Charles-street, Berkeley-square. C. 1826. S. 1827. V.P. 1830.
- 1840 WILLIAM SHARP, F.R.S. F.G.S. F.R.A.S., Rugby.
- 1837 WILLIAM SHARPEY, M.D. F.R.S. L. and E., Professor of Anatomy and Physiology in University College, London, and Secretary of the Royal Society; Gloucester-crescent, Regent's-park. C. 1848.
- 1836 ALAXANDER SHAW, Surgeon to, and Lecturer on Surgery at, the Middlesex Hospital; Henrietta-street, Cavendish-square. C. 1842. S. 1843. V.P. 1851.
- 1848 *EDWARD JAMES SHEARMAN, M.D., Rotherham, Yorkshire.

1849 Francis Sibson, M.D. F.R.S., Physician to St. Mary's Hospital; Brook-street, Grosvenor-square.

1848 EDWARD HENRY SIEVEKING, M.D., Assistant-Physician to St. Mary's Hospital; Bentinck-street, Manchester-sq.

1839 THOMAS HOOKHAM SILVESTER, M.D., High-street, Clapham. C. 1854.

1842 John Simon, F.R.S., Surgeon and Lecturer on Pathology at St. Thomas's Hospital; Upper Grosvenor-street. C. 1854.

1821 CHARLES SKENE, M.D., Professor of Anatomy and Surgery;
Marischal College, Aberdeen.

1827 GEORGE ROBERT SKENE, Bedford.

1824 Frederic Carpenter Skey, F.R.S., Surgeon to, and Lecturer on Anatomy at, St. Bartholomew's Hospital;
Surgeon to the Northern Dispensary; Grosvenor-street,
Grosvenor-square. C. 1828. L. 1829. V.P. 1841.

1838 Henry Spencer Smith, Senior Assistant-Surgeon to St.
Mary's Hospital; and Lecturer on Surgery in the
Medical School adjoining St. George's Hospital; Sussexgardens, Hyde-park. C. 1854.

1835 JOHN GREGORY SMITH, Harewood, Yorkshire.

1843 ROBERT WILLIAM SMITH, M.D. M.R.I.A., Professor of Surgery in the University of Dublin; Surgeon to the Richmond Hospital; Dublin.

1852 CHARLES CASE SMITH, Senior-Surgeon to the Suffolk General Hospital; Bury St. Edmunds, Suffolk.

1845 WILLIAM SMITH, Park-street, Bristol.

1847 WILLIAM SMITH, M.D., Weymouth, Dorsetshire.

1850 WILLIAM TYLER SMITH, M.D., Physician-Accoucheur to St.
Mary's Hospital; Upper Grosvenor-street, Grosvenor-square.

1843 John Snow, M.D., Sackville-street, Piccadilly.

1851 JOHN SODEN, Surgeon to the Bath Hospital; Bath.

1816 *John Smith Soden, New Sidney-place, Bath.

1830 SAMUEL SOLLY, F.R.S., Surgeon to St. Thomas's Hospital; St. Helen's Place, Bishopsgate-street. L. 1838. C. 1845. V.P. 1849.

1844 FREDERICK ROBERT SPACKMAN, M.B., Harpenden, St. Alban's.

1834 JAMES SPARK, Newcastle, Staffordshire.

- 1851 ROBERT JOHN SPITTA, M.B., Clapham, Surrey.
- 1843 *Stephen Spranger, Grantham, Lincolnshire.
- 1838 GEORGE JAMES SQUIBB, 11, Montague-place, Montague-sq.
- 1815 EDWARD STANLEY, F.R.S., Surgeon to St. Bartholomew's Hospital; Brook-street, Grosvenor-square. C. 1821. S. 1824. V.P. 1827. T. 1832. P. 1843. C. 1852-3.
- 1851 James Startin, Surgeon to the Hospital for Diseases of the Skin, and Lecturer on Cutaneous Disorders at that Institution; Savile-row, Regent-street.
- 1852 SHERARD FREEMAN STATHAM, Assistant-Surgeon to University College Hospital; 43, Mortimer-street, Cavendish-square.
- 1854 HENRY STEVENS, Resident Medical Officer, St. Luke's Hospital; St. Luke's.
- 1842 ALEXANDER PATRICK STEWART, M.D., Assistant-Physician to, and Lecturer on Materia Medica at, the Middlesex Hospital; Grosvenor-street, Grosvenor-square.
- 1843 ROBERT REEVE STORKS.
- 1844 JOHN SOPER STREETER, Harpur-street, Red Lion-square.
- 1847 WILLIAM ALLEN SUMNER, Surgeon to the Portland Town Free Dispensary; 25, Wellington-toad, St. John's-wood,
- 1839 ALEXANDER JOHN SUTHERLAND, M.D. F.R.S., Physician to St. Luke's Hospital; Richmond-terrace, Whitehall. C. 1850.
- 1842 James Syme, Professor of Clinical Surgery in the University of Edinburgh; Charlotte-square, Edinburgh.
- 1854 *FREDERICK SYMONDS, Surgeon to the Radeliffe Infirmary; 32, Beaumont-street, Oxford.
- 1844 RICHARD WILLIAM TAMPLIN, Surgeon to the Royal Orthopædic Hospital; Old Burlington-street.
- 1848 THOMAS HAWKES TANNER, M.D., Physician to the Hospital for Women, Soho-square; Charlotte-street, Bedford-square.
- 1840 Thomas Tatum, Surgeon to, and Lecturer on Surgery at, St. George's Hospital; George-street, Hanover-square. C. 1852-3.
- 1835 JOHN COLLEY TAUNTON, Surgeon to the City of London Truss Society, and to the City Dispensary; Hattongarden, Holborn. C. 1840.

- 1845 THOMAS TAYLOR, Vere-street, Cavendish-square.
- 1852 ROBERT TAYLOR, M.D., 82, Guildford-street, Russell-square.
- 1845 *Evan Thomas, Manchester.
- 1839 SETH THOMPSON, M.D., Physician to, and Lecturer on Medicine at, the Middlesex Hospital; Lower Seymour-street, Portman-square. C. 1849. S. 1850.
- 1842 Theophilus Thompson, M.D. F.R.S., Physician to the Hospital for Consumption and Diseases of the Chest Bedford-square.
- 1852 Henry Thompson, Surgeon to the St. Marylebone Dispensary and Infirmary; 16, Wimpole-street, Cavendish-square.
- 1835 FREDERICK HALE THOMSON, Clarges-street, Piccadilly.
- 1819 JOHN THOMSON, M.D. F.L.S., Physician to the Finsbury Dispensary; Dalby-terrace, Islington. C. 1833. S. 1834. V.P. 1850.
- 1850 ROBERT DUNDAS THOMSON, M.D., Professor of Chemistry, University of Glasgow.
- 1836 JOHN THURNAM, M.D., Devizes, Wiltshire.
- 1848 Edward John Tilt, M.D., Physician to the Farringdon Dispensary; York-street, Portman-square.
- 1834 ROBERT BENTLEY TODD, M.D. F.R.S., Vice-President; Physician to King's College Hospital, Professor of Physiology and of General and Morbid Anatomy in King's College, London; Brook-street, Grosvenor-square. L. 1842. T. 1850.
- 1828 James Torrie, M.D., Aberdeen.
- 1843 Joseph Toynbee, F.R.S., Aural Surgeon to St. Mary's Hospital, Consulting Aural Surgeon to the Asylum for the Deaf and Dumb, and Consulting Surgeon to the St. George's and St. James's General Dispensary; Savilerow, Regent-street.
- 1850 SAMUEL JOHN TRACY, Surgeon-Dentist to St. Bartholomew's and Christ's Hospitals; Finsbury-place, Finsbury-square.
- 1808 Benjamin Travers, F.R.S., Surgeon Extraordinary to the Queen, Surgeon in Ordinary to His Royal Highness Prince Albert; Green-street, Grosvenor-square. C. 1810. V.P. 1817. P. 1827.

- 1841 MATTHEW TRUMAN, M.D., Norland-square, Notting-hill.
- 1835 John Cusson Turner, M.D., Brighton.
- 1845 THOMAS TURNER, Surgeon to the Royal Manchester Infirmary, and Lecturer on Anatomy; Mosley-st., Manchester.
- 1846 ALEXANDER URE, Surgeon to St. Mary's Hospital, and Consulting Surgeon to the Westminster General Dispensary; 18, Upper Seymour-street, Portman-square.
- 1819 BARNARD VAN OVEN, M.D., Consulting Surgeon to the Charity for Delivering Jewish Lying-in Women; 22, Manchester-square.
- 1806 BOYER VAUX, M.D.
- 1839 WILLIAM RANDALL VICKERS, Baker-street, Portman-square.
- 1810 JAMES VOSE.
- 1828 Benedetto Vulpes, M.D., Physician to the Hospital of Aversa, and to the Hospital of Incurables, Naples.
- 1854 EDWARD WADDINGTON, 2, Guildford-place, Russell-square.
- 1841 ROBERT WADE, Surgeon to the Westminster General Dispensary; Dean-street, Soho.
- 1823 WILLIAM WAGNER, M.D., Berlin.
- 1820 THOMAS WALKER, M.D., Physician to the Forces; Morro Velhio, Brasil.
- 1852 Walter Hayle Walshe, M.D., Professor of the Theory and Practice of Medicine in University College, and Physician to University College Hospital; 40, Queen Anne-street, Cavendish-square.
- 1851 HRNRY HAYNES WALTON, Surgeon to the Central London Ophthalmic Hospital, and Assistant-Surgeon to St. Mary's Hospital; Brook-street, Hanover-square.
- 1852 Daniel Wane, M.D., 20, Grafton-street, Berkeley-square.
- 1846 Nathaniel Ward, Assistant-Surgeon to, and Demonstrator of Anatomy at, the London Hospital; Broad-street-buildings, City.
- 1845 THOMAS OGIER WARD, M.D., Leonard-place, Kensington.
- 1821 WILLIAM TILLEARD WARD, Duncannon-house, Brighton.
- 1846 James Thomas Ware, Surgeon to the Finsbury Dispensary, and to the Convalescent Institution; Russell-square.
- 1811 JOHN WARE, Clifton, near Bristol.
- 1814 MARTIN WARE, Russell-square, Vice-President. C. 1844. T. 1846.

- 1816 *CHARLES BRUCE WARNER, Cirencester, Gloucestershire.
- 1829 ELIAS TAYLOR WARRY, Wimborne, Dorsetshire.
- 1837 THOMAS WATSON, M.D., Henrietta-street, Cavendish-square. C. 1840. V.P. 1845. C. 1852.
- 1847 *THOMAS WATSON, Holbeach, Lincolnshire.
- 1854 WILLIAM WEBB, M.D., Resident Medical Officer of the Stafford General Infirmary; Stafford.
- 1840 WILLIAM WOODHAM WEBB, Gislingham, near Thwaite, Suffolk.
- 1842 Frederick Weber, M.D., Physician to the St. George's and St. James's Dispensary; Green-street, Park-lane.
- 1835 John Webster, M.D. F.R.S., Consulting Physician to the St. George's and St. James's Dispensary; Brook-street, Grosvenor-square. C. 1843.
- 1844 WILLIAM WEGG, M.D., Librarian; Physician to the St. George's and St. James's Dispensary; Maddox-street, Hanover-square.
- 1854 THOMAS SPENCER WELLS, 30, Brook-street, Grosvenor-square.
- 1816 SIR AUGUSTUS WEST, Knt., Deputy-Inspector of Hospitals to the Portuguese Forces; Paris.
- 1842 CHARLES WEST, M.D., Physician-Accoucheur to, and Lecturer on Midwifery at, St. Bartholomew's Hospital; and Physician to the Hospital for Sick Children; Wimpole-street, Cavendish-square.
- 1841 THOMAS WEST, M.D. F.L.S., Daventry.
- 1828 JOHN WHATLEY, M.D.
- 1849 JOHN WHITE, the Albany, Piccadilly.
- 1852 John Wiblin, 73, Morland-place, Southampton.
- 1840 Joseph Wickenden, Birmingham.
- 1824 *WILLIAM JOHN WICKHAM, Surgeon to the Winchester Hospital; Winchester.
- 1844 Frederick Wildbore, 1, Trafalgar-place East, Hackney-road.
- 1837 George Augustus Frederick Wilks, M.D., Temple-walk, Matlock, Derbyshire.
- 1840 CHARLES JAMES BLASIUS WILLIAMS, M.D. F.R.S., Upper Brook-street, Grosvenor-square. C. 1849.
- 1829 ROBERT WILLIS, M.D., Barnes, Surrey. L. 1838.

- 1839 Erasmus Wilson, F.R.S., Consulting Surgeon to the St. Pancras Infirmary; Henrietta-street, Cavendish-square.
- 1839 James Arthur Wilson, M.D., Physician to St. George's Hospital; Dover-street, Piccadilly. C. 1846.
- 1831 WILLIAM JAMES WILSON, Surgeon to the Manchester Infirmary; Manchester.
- 1850 *ROBERT STANTON WISE, M.D., Banbury, Oxon.
- 1825 THOMAS ALEXANDER WISE, India.
- 1851 JOHN WOOD, 21, Newcastle-street, Strand.
- 1841 George Leighton Wood, Surgeon to the Bath Hospital; Queen-square, Bath.
- 1848 WILLIAM WOOD, M.D., Kensington-house, Kensington.
- 1843 JOHN WARD WOODFALL, M.D., Physician to the West Kent Infirmary; Maidstone, Kent.
- 1833 THOMAS WORMALD, Vice-President; Assistant-Surgeon to St. Bartholomew's Hospital; Bedford-row. C. 1839.
- 1842 WILLIAM COLLINS WORTHINGTON, Surgeon to the Infirmary, Lowestoft, Suffolk.
- 1848 EDWARD JOHN WRIGHT, Kennington-row, Kennington.

[[]It is particularly requested, that any change of Title or Residence may be communicated to the Sceretaries before the 1st of August in each year, in order that the List may be made as correct as possible.]

HONORARY FELLOWS.

(Limited to Twelve.)

- 1841 WILLIAM THOMAS BRANDE, F.R.S.L. and E., Professor of Chemistry at the Royal Institution of Great Britain; Royal Mint, Tower-hill.
- 1835 SIR DAVID BREWSTER, K.H. LL.O F.R.S. L. and E., &c., Cor. Mem. Institute of France, &c.; Kingussie.
- 1853 Benjamin Collins Brodie, B.A., Oxford, F.R.S.; 13, Albert-road, Regent's-park.
- 1841 ROBERT BROWN, D.C.L. F.R.S., President of the Linnean Society; British Museum.
- 1835 The Very Rev. WILLIAM BUCKLAND, D.D. F.R.S., Dean of Westminster.
- 1847 EDWIN CHADWICK, Commissioner of the Board of Health.
- 1835 MICHAEL FARADAY, D.C.L. F.R.S., Cor. Memb. Institute of France; Royal Institution.
- 1841 SIR JOHN FREDERICK WILLIAM HERSCHEL, Bart., D.C.L. F.R.S., President of the Royal Astronomical Society; Somerset House.
- 1835 SIR WILLIAM JACKSON HOOKER, LL.D. F.R.S. L. and E., Royal Botanic Garden, Kew.
- 1847 RICHARD OWEN. F.R.S., Cor. Memb. Institute of France; Hunterian Professor to, and Curator of the Museum of, the Royal College of Surgeons of England.
- 1835 The Rev. Adam Sedgwick, A.M. F.R.S., &c., Woodwardian Lecturer, Cambridge.
- 1841 The Rev. William Whewell, D.D. F.R.S., Master of Trinity College, Cambridge.

FOREIGN HONORARY FELLOWS.

(Limited to Twenty.)

- 1841 G. Andral, M.D., Professor in the Faculty of Medicine, Paris.
- 1835 CARL JOHAN ECKSTRÖM, K.P.S. and W., Physician to the King of Sweden, First Surgeon to the Seraphim Hospital, Stockholm.
- 1841 CHRISTIAN GOTTFRIED EHRENBERG, Berlin.
- 1835 BARON A. DE HUMBOLDT, Member of the Institute of France, &c., Berlin.
- 1841 James Jackson, M.D., Professor of Medicine in the University of Cambridge, Boston, U.S.
- 1843 BARON JUSTUS LIEBIG, M.D. F.R.S., Professor of Chemistry in the University of Giessen, &c.
- 1841 P. C. A. Louis, M.D., Physician to the Hôtel-Dieu, Member of the Royal Academy of Medicine, &c., Paris.
- 1841 F. MAGENDIE, M.D., Member of the Institute; Physician to the Hospital of the Salpêtrière; Paris.
- 1847 PROFESSOR CARLO MATTEUCCI, University of Pisa.
- 1811 JOHANN MULLER, M.D., Professor of Anatomy and Physiology, and Director of the Royal Anatomical Museum, Berlin.
- 1841 BARTOLOMEO PANIZZA, M.D., Pavia.
- 1850 CARL ROKITANSKY, M.D., Curator of the Imperial Pathological Museum at the University of Vienna, &c. &c.
- 1853 VALENTINE MOTT, M.D., New-York.
- 1835 C. J. TIMMINCK, Director of the Museum of Natural History of the King of Holland, Amsterdam.
- 1835 FREDERICK TIEDEMANN, M.D., Professor of Anatomy and Physiology, Heidelberg.
- 1841 John C. Warren, M.D., Professor of Anatomy and Surgery in the University of Cambridge, Boston, U.S.

SCROFULOUS CARIES

OF

THE LEFT ASTRAGALUS.

EXCISION-CURE,

WITH FORMATION OF A FRESH JOINT.

BY

S. F. STATHAM,

ASSISTANT-SURGEON, UNIVERSITY COLLEGE HOSPITAL

Received Nov. 7th, 1853.—Read Jan. 24th, 1854.

Henry Cudden, æt. 5, of strumous tendency, was said to have had weakness of the left ankle since birth. At Christmas, 1851, a swelling appeared below the outer side of the left ankle, which was blistered; since May he has been under hospital treatment; painting with iodine was frequently employed; latterly the formation of matter pointed naturally on the inner side, and required opening outside the joint.

August 25, 1852.—The integument was much diseased about the ankle; but on closer examination, and after a week's rest in the hospital, it was found to be actually implicated only where corresponding to the situation of the astragalus. Chloroform being administered, the fistulæ were thoroughly examined. On the outer side the probe reached the surface

XXXVII.

of the astragalus, which was exposed and softened, and there was a fistula leading backwards by the side of the calcaneum; on the inner side a probe passed easily along the posterior face of the astragalus. The ankle-joint was healthy.

Medicines and local applications having been fairly tried without avail, amputation below the knee would probably become inevitable; and as his health was already materially suffering, resection of the astragalus, and of any portion of the calcaneum that might be necessary was considered justifiable, if only to be followed subsequently by removal of the limb.

August 27 .- My friends Messrs. Marshall and Glover assisting me, an incision, three inches long, was carried along the outer side of the extensor tendons of the toes, and another to fall into the middle of this one from the outer side of the foot. The finger found carious disease of the neighbouring surfaces of the astragalus and calcaneum. Having lifted up the flaps of the soft parts, and separated the tendons and vessels in front of the joint in one mass from the bone, it was sought to release its head, which proving troublesome, all difficulty was at once removed by cutting through the neck of the astragalus with the scalpel, and then by means of the fingers and sequestrum-forceps, the pieces were dragged out, while the knife freed them from the surrounding parts. During extraction, the posterior portion of the upper cartilaginous surface became separated from the body of the bone, and was removed later; this circumstance much facilitated the operation. The upper surface of the calcancum, for its posterior two thirds, was found to be carious, and was therefore gouged off to a depth of about one eighth of an inch. The foot hung perfectly loose; three fingers could be easily introduced to the bottom of the wound, the surfaces of the tibia and fibula were sound, the remaining portions of the tarsus offered no reasons for interfering with them. It was found that the tendons of the peroneus brevis and external tendon of the extensor of the toes had been divided, the lateral ligaments to the calcaneum had escaped, and no vessels required ligature, the profuse hæmorrhage

being readily checked by cold water. Lint was introduced into the cavity of the wound. The same evening a splint was applied on the inner side of the leg and foot, and a piece of wet lint laid over the wound; this was still large and gaping, as the calcaneum would not enter between the malleoli. The splint and pad was perforated to allow the escape of any wound-secretions.

On examination of the bone, the upper articular cartilage appeared to be unaffected, but easily separated from the carious body of the bone beneath. The posterior articulation of the astragalus with the calcaneum had disappeared. The head and neck of the bone appeared to be sound.

September 1st.—Wound suppurating, health fair. Was put on iron and nitric acid, later porter; fish, &c. The foot was never removed from the splint, nor the watery pus from the cavity of the wound, otherwise than by trickling water over it, for a whole fortnight.

At the expiration of this time, September 11th, chloroform being given a third time, the side-splint was changed for one of tin fitted to the back of the leg and foot. The foot was found slightly raised on the inner side, otherwise in good position; the wound was filled from the bottom and sides by coarse vascular granulations, not thoroughly united, so that three passages, admitting a probe loosely, ran to the posterior inner corner of the wound, where a small portion of the calcaneum was exposed (having apparently escaped the gouge); all other parts of the wound presented to the probe a softish mass, which it was not attempted to penetrate. The edges began to draw in and cicatrize, and their neighbourhood became much improved on the state prior to the operation.

About October 10th, Mr. Erichsen examined the wound, and found no bone exposed.

October 15th.—By Mr. Erichsen's advice, ointment of the nitric-oxide of mercury was used to the edges of the flabby wound with advantage. The anterior fistula healed, the posterior one became quiescent. A dextrine bandage was applied, and the patient discharged.

November 15th.—The wounds were fairly healed.

Christmas and Lady-day.—He is going on thoroughly well, can walk without pain; there is free mobility of the new joint, the cicatrix is becoming much firmer and smaller. Till now a splint has been constantly employed; he may have a boot fitted. Slight inversion of the foot continues, and the leg is about one inch shorter than the other.

June 14th.—Mr. Gray, of Cork street, made him a well fitted boot, the heel raised, an iron support up to the knee (jointed opposite the ankle to allow limited motion), with a broad strap around the ankle, and another band below the knee. The lad is able to walk and run without any pain, and with merely a halt, partly due to the incumbrance of the instrument. The foot is perfectly sound; he can extend it well, flexion of it on the leg is not so easy, the present relative position of the parts being more disadvantageous for this action than before; its mobility is complete. Inversion of the foot has disappeared.

I must acknowledge my thanks to Mr. James Turle, the house-surgeon, for the great care and ability with which he treated the patient.

A few remarks may be offered on this case; the full feasibility of the operation was fully established, supposing the disease to be confined to the astragalus, by the success of similar operations occasionally requisite in the after-treatment of dislocations of that bone. Had the calcaneum been more diseased than it proved to be, any portion demanding such treatment would have been removed by similar incisions, even if it had been necessary, following Mr. T. Wakley's example, to excise the whole of that bone. It is noticeable that no harmorrhage occurred; no important tendons or ligaments were divided; and that the recovery is perfect.

That we may in future be able to restore the sound condition of scrofulous caries of bone is to be hoped for; at present we may congratulate ourselves if the excision is complete, and the functions of the part uninjured. No other apparatus than a high-heeled boot is now necessary.

In a case of Liston's, the astragalus and ends of the tibia and fibula were removed with success. Other cases of the removal of single bones of the tarsus for scrofulous caries, have been, I believe, limited to less important ones than the astragalus.

Chloroform is a most important agent, as the patient can be fairly examined, as he should be, some days before the operation.

The absolute necessity of not meddling with the parts after the operation, where interference is uncalled for, may be well illustrated from Stromeyer on Gun-shot Wounds: "A young officer, whose humerus had suffered comminuted fracture two-fingers' breadth below its head, and for whom exarticulation of the part had been first proposed, complained to me bitterly that his attendant had allowed the first dressings to remain so long, that maggots had bred in them. I told him, however, that he must thank this gentleman for the preservation of his arm."

In the dead body of adult males, I have since found that the astragalus can be removed by clipping off its head by Liston's forceps, and by dividing the body of the bone backwards by the same instrument, so as to cause no kind of injury to surrounding structures.

On referring to Mr. Dunn's remarkable case, I am no longer surprised that it is not especially quoted as an example to follow, as such repeated operations and dangers from hæmorrhage could hardly allow of success in the average of cases met with. The excision of the tarsal bones between the astragalus and metatarsal, viz., of the cuboid and ext. cuneiform, first, and of the scaphoid and other cuneiform, later, besides at the later period scraping the astragalus, and removing the tarsal ends of the second and third metatarsal—although the patient had four years afterwards a foot in which "the natural appearance was little altered,"—this wholesale excision is certainly a case of wonderful recovery, but at the same time is certainly—on account of the destruction of natural connections, and necessary division of tendons, vessels, &c.—a case which cannot be

quoted otherwise than as an exceptional one. I expect, therefore, though itself successful, it has actually been of more harm than advantage to conservative surgery, for few would like to undertake such an uncertain operation.

I am not aware of excision of the astragalus alone, for scrofulous disease, having been previously performed.

PATHOLOGICAL REMARKS

ON THE KIND OF

PALPEBRAL TUMOUR

USUALLY CALLED, IN ENGLAND, TARSAL TUMOUR.

BY

II. HAYNES WALTON, Esq., F.R.C.S.,

SURGEON TO THE CENTRAL LONDON OPHTHALMIC HOSPITAL;
ASSISTANT-SURGEON TO ST. MARY'S HOSPITAL.

Received Nov. 28th, 1853 .- Read Jan. 24th, 1854.

THE subject of tumours of the ocular appendages is obscurely treated of by writers, more, I believe indeed, than any in the whole range of ophthalmological literature. The several stages of the same affection are described as different diseases, and the same diseases are dissimilarly delineated. A Greek and a Latin word bearing the same signification,—Chalazion and Grando, are applied to different morbid states. The disease I now propose to treat of is involved in similar perplexity; for I find it spoken of as "fibrinous tumour," "tarsal tumour not encysted," "albuminous tumour," and by other terms equally erroneous. There is also disagreement concerning its connection, whether moveable or not, and even as to consistence, whether hard or soft. I propose, therefore, in order to be understood respecting the tumour I mean, to describe the most palpable objective characteristics, before I point out what appears to be its pathological condition, and which has not, so far as I am aware, ever been demonstrated.

Commencing, then, with the external characters, I would speak of it as a hard, spherical, well-defined tumour, in size

varying from that of a grain of small shot to that of a pea, and limited to a position on the cyclid corresponding to the space bounded by the cilia bulbs, and the upper margin of the tarsus; that is, corresponding to the position of the meibomian glands, not growing at the edge, and immoveable. Inadherent to the skin, which may or may not be traversed by enlarged blood-vessels, being usually solitary, and for the most part growing on the upper cyclid, yet acquiring the largest dimensions on the under, where the skin is generally in the natural state; not unfrequently giving, on the internal surface of the cyclid, indication of its existence by a spot of preternatural redness, and at a later period discoloration, or even a small fungous growth.

In proceeding now to its pathology, I must at starting acknowledge the assistance that I have here received from Dr. Druitt. A very marked example of the tumour on the upper cyclid in a male, æt. 53, having come under my care in the summer of this year, I turned the skin aside and removed it, together with the corresponding portion of the tarsus, and sent it to him for investigation, as he was at the time working on the subject of tumours. It may be well, before I subjoin his valuable report, to state, that the wound was brought together with sutures, and healed quickly, not only without disfiguration, but without leaving a scar.

"The tumour," he says, "was oval, \(\frac{17}{48} \) ths of an inch in its length, and \(\frac{13}{48} \) ths in its short diameter; having on the one side the entire thickness of the tarsal eartilage (so called) with the conjunctiva, on which a few meibomian follicles projected in the form of yellow granules; and on the other, some fibres of the orbicularis. It was evident that the growth was most intimately adherent to the (so called) tarsal cartilage. On bisecting it by a clean incision, some viscid, puriform fluid escaped. On closer examination, the centre appeared to be constituted by a very clear transparent membranous cyst, almost \(\frac{1}{12} \) th of an inch in diameter, containing the aforesaid puriform fluid, and in the very midst, a small perfectly smooth circular pellet of schaceous matter. Around this cyst was a soft pinkish material, and this again was con-

tained within a tough fibrous capsule, continuous with the fibrous envelope of the (so called) tarsal cartilage." He continues: "On making further sections, and examining them microscopically I perceived—1st, The conjunctival surface covered with epithelium, several branches of meibomian follicles projecting like villi, these follicles being filled with solid or liquid sebaceous matter, and constituting the yellow granular bodies visible to the naked eyc. 2d, I noticed the proper fibrous tissue, commonly called cartilage, of the lid, the fibres for the most part running parallel with the conjunctival surface; it was abundantly permeated by vessels, and contained in spherical loculi, bunches of meibomian follicles. 3d, These follicles, except that some projected, as aforesaid, like bunches of currants, on the conjunctival surface were mostly contained in spherical fibrous loculi within the fibrous membrane. Some contained soft, others hard matter. 4th, The tumour itself, consisting externally of a dense, fibrous cyst, continuous with the fibrous tissue of the lid; within this a layer of fibro-plastic matter, soft, pink, abundantly supplied with vessels from the fibrous cyst, composed of fibro-plastic cells, with a very little intercellular fibrillary matter; within this, the thin pellucid cyst above mentioned, containing a puriform fluid, made up of pus globules, epithelium cells loaded with oil, and in the centre a perfectly round pellet of sebaceous matter." In conclusion, he suggests the following to be the order of development: "1st, The formation, with a meibomian follicle, of a pellet of hard schaceous matter. 2d, The secretion of a more copious epithelium and fluid matter around. 3d, The addition of fibro-plastic matter around the obstructed gland follicle, distending the loculus of fibrous membrane into a cyst."

Through the liberality of the Museum Committee of the Royal College of Surgeons, I have been allowed, in conjunction with Mr. Quekett, to examine two tumours of this class belonging to the College Museum, whereby the accuracy of Dr. Druitt's statement is verified, and other facts have been elicited. It was quite impossible, while these specimens were in the bottles, to understand them, and the references

to them in the Catalogue, is not descriptive. I mention this, because I have, elsewhere, rather misrepresented them. In the one, on the outside of the tarsus from which the skin and the orbicularis muscle are removed, are two growths, one very small, too minute, perhaps, to have been recognised in life, and overlapped by the greater, many sizes larger; which, although firmly incorporated with the tarsus, holds its union by a small base. On the inside of the tarsus, the site of each is plainly marked by yellowish deposits in the course of the meibomian glands. Both were cut across, and found to contain epithelium scales and sebaceous matter. I beg to direct attention to the circumstance that the lesser, which is just enough developed to admit of a distinctive character, is equally well marked within the lid as the larger.

The other specimen afforded less definite information, yet it was peculiar and also instructive. The tumour occupied the entire upper eye-lid, from which the tarsus had nearly disappeared. It consisted, on the external or upper surface, of a dense fibrous sac: on the inside, that is within the lid, of conjunctiva. The interior, which was irregular and cryptlike, was, as in the other tumours, filled with epithelium scales and sebaceous matter. It would seem here, as if the entire meibomian apparatus had been simultaneously diseased.

I submit to the Society whether, if they consider the pathology of the disease to be proved, it would not be judicious to institute the term meibomian tumour, and to adopt a name alike simple, correct, and significant, an advantage not often to be met with in the nomenclature of ophthalmic literature, which is for the most part abominable and barbarous.

I have often heard it advanced in argument against the tumour originating in the meibomian glands, that it is always on the outside of the tarsus. This erroneous statement is advanced on the fulse supposition of the situation of these glands. It has long been pointed out that they are imbedded in the tarsus; however, anatomical works state differently,

and describe them as seated between the conjunctiva and it. The entire glands are within the tarsus, their ducts even traverse it, and open on its free margin. The relative anatomy of the parts may to a certain extent be seen with the naked eye, for if the tarsus be dissected out, the glands will be equally visible on either side.

It appears to me that the determination of the tumour outwards, depends on the same law that causes the elimination outwards of foreign substances from the body, and includes in its operation the directing of morbid growths to the surface. That there is occasionally an exception to the law, the tumour taking an inward direction, and appearing on the side of the eye-lid, all surgeons engaged in ophthalmic practice are aware. It then appears in an arrested state, which may be thus explained. The discoloured spot on the interior of the eye-lid, above spoken of as giving internal indication of existence of the tumour, is produced by absorption of the tarsus, solely, I believe, in consequence of the pressure produced by the tumour on the eye-ball, and hence the upper eye-lid, as it is more in contact with the eve-ball, usually exhibits this change earlier and in a more marked degree. This may not proceed beyond a very limited extent, but occasionally much of the tarsus is removed when the determination inward would seem inevitable. With the removal of the tarsus, the chief and densest covering is lost, and perhaps as a consequence, there is no deposit of the fibroplastic material. The conjunctiva, then the only envelope, if not interfered with by art, is apt, like the tarsus, to suffer from absorption and ulceration, allowing the exposure of the distended follicle, which in turn is similarly affected, and discharges its morbid contents, or throws out a fungus growth.

It is well known that meibonian tumours may contain dissimilar substances, or a mixture of them; we meet with glairy, sebaceous, creamy, or purulent deposits; and that the amount does not always bear an uniform relation to the size of the tumour, there being sometimes scarcely any fluid in a very large one, the sac being filled with a solid material.

On this point I venture to suggest, that some of these characters depend on the changes effected in the fibro-plastic material that is deposited. For instance, with the onward development of the plastic material, white, or yellow fibrous tissue is produced, as in the tumour commonly called polypus; hence the more solid tumour. Or, if it degenerate and undergo retrograde metamorphosis, the cells are converted into pus, or pyoid cells, and the inter-cellular tissue into a creamy fluid.

P.S.—I desire to say, that since I have adopted the pathological views above stated, I have, whenever surgical measures are required, ceased to employ in general the usual method of attacking the meibomian tumour from the interior of the eve-lid; but for the most part, that is, when the tumour takes an outward direction, I divide it on the outside, squeeze out the contents, and when it can be accomplished, pull away the cyst with a pair of forceps, or if necessary, remove it by dissection. I am enabled to assert, that this process is far superior to the other, insomuch as it is instantaneously effectual. It is not necessary for me to point out the tediousness and uncertainty of the older method. I must add, that there need be no fear respecting the formation of a scar on the eye-lid; for if the incision be made horizontally, and the edges be brought together by a strip of plaster, no trace of the operation is left.

NOTICE OF A CASE

OF

SKIN DISEASE

ACCOMPANIED WITH

PARTIAL HYPERTROPHY OF THE MAMMARY GLAND.

BY

JAMES ALDERSON, M.D., F.R.S.,

SENIOR PHYSICIAN TO ST. MARY'S HOSPITAL; ONE OF THE VICE-PRESIDENTS OF THE SOCIETY.

Received Jan. 10th.-Read Feb. 24th, 1854.

The record of an isolated case ought not to be laid before this Society without sufficient reasons in the way of apology. In diseases the pathology of which is in a great measure understood, and of which fresh knowledge can only be established by collating the facts of a variety of cases, the record of one, or even a few, remarkable incidents can serve but little to advance our clear appreciation of disease.

It is requisite, therefore, to the value of a single record, that the disease should be rare; that the appearances should have been unrecorded; and that there should be a satisfactory issue, whether that be of recovery, or of elucidation through the means of its fatal course affording a subsequent examination of the nature of the disease and of its relation to other classes better known.

I conceive that this case includes the earlier-named conditions requisite for the apology. The alarm which the appearances gave rise to were sufficiently grave to commend it to our careful examination; while the favorable issue, if less calculated than a fatal one to clucidate its history, at

least bears with it a certain amount of instruction on the point of treatment.

The subject of this case was a young lady, act. 20, of fair complexion, light blue eyes, and fair hair. When I first saw her, the left breast presented a diseased surface, at the upper part, to the extent of about four inches in length by about an inch and three quarters in width. The appearances presented were a perfectly smooth, polished surface, of an opaque yellowish-white colour, like polished vellum or ivory; the margin of the diseased portion was defined by a strongly-marked border of injected vessels, but on the polished surface no vascularity could be perceived; there was no exudation whatever on any part of the breast—no crust or scurf of any kind.

The young lady had noticed the first appearance of this state of skin twelve months before, when it appeared about the size of a florin. It had been watched during the interval by Mr. Cartwright, of Oswestry, and had gradually increased during the last four months, assuming the appearance I have now described. The breast itself was larger than its fellow, and on examination by touch was found to contain several hard, resisting, nodulated tumours, varying from the size of a dwarf orange to that of a walnut, one of which (a small one on the left side) was alone sensible on being touched. A small enlarged gland was found in the left axilla, to which an absorbent vessel could be traced from the breast. The young lady suffered no pain in the part affected, but merely acknowledged to a sensation which she described as simply reminding her that there was something there. She was cheerful, and not suffering any serious apprehension; her general health was good, the constitutional change only being rather in defect.

Shortly after I first saw her, Mr. Ure joined me in consultation. The following description is quoted from his very accurate notice of the appearances, as recorded in his note-book:—"The integument over the upper part of the left mamma is thickened and indurated, or rather condensed, in an uniform manner, to the extent of four inches trans-

versely and one inch and three quarters from above downwards, and presents a dull white appearance, not unlike parchment; it is the seat, occasionally, of increased heat; one of the axillary glands is enlarged. . . . Some of the lobules of the subjacent glandular structures are enlarged, and of a more solid consistence than natural. There are several punctuate elevations of acne indurata over the back of the neck and shoulders." Mr. Ure was of opinion that there was partial hypertrophy of the mammary gland, with interference with the nutrition of the adjacent integument, connected with the catamenial disturbance.

It was determined to give the patient small doses of liquor potassæ twice daily, in infusion of cloves, and to have the affected surface pencilled over twice a week with tineture of iodine. She was recommended to return to the country for a month.

On her return to London, no progress having appeared towards recovery to a healthy state of the part, we acceded to the request of Mr. Cartwright, that Mr. Hodgson's experience should be added to the consultation. Mr. Hodgson compared the appearance to that of a scar left by a blister, as it appears after death. It is useful to record the impression which the appearance made on different observers. The vascular margin, which remained as at first seen, would, however, to my idea, have failed to establish this resemblance. The only case which Mr. Hodgson adduced as bearing any resemblance, was that of a woman, æt. 46, and, as that ease ultimately proceeded to display itself as carcinoma, he was led to draw an unfavorable prognostic. With this discouraging view of the probable result, he deprecated the smallest approach to irritation of the part, and recommended a lotion of the diacetate of lead to be substituted for the iodine, to be applied four or five times in the day; the part to be covered with oiled silk. The general treatment was continued, and the patient once more returned into the country. At this time Mr. Ure's note is as follows: -" Parchment-like patch, as before, surrounded at its margin by a narrow faint blush, from capillary injection; indurated and enlarged lobules of the mammary gland can be felt in the axillary half of the breast, and also towards the sternum, lying under the patch."

The diseased surface, however, continued to increase in extent, and with its spread the anxiety of friends became of course more serious. All parties naturally wished for the first surgical opinion in London, and I felt it right to comply with the suggestion of the friends, that I should have an interview with Sir Benjamin Brodie.

In his very large experience, Sir Benjamin Brodie could only adduce a single similar case—one which had occurred in the wards of St. George's Hospital, followed by a complete recovery. In that case the skin alone had been involved. The process of cure had been by throwing off of successive layers of diseased skin, during which the extent of surface became continually reduced, the skin beneath ultimately assuming its natural appearance, the patch becoming smaller and smaller, till it disappeared. Sir Benjamin Brodie considered the case less allied to carcinoma than to dry gangrene, since the vessels of the white surface were apparently destroyed, the injected edge forming a line of demarcation from which the vellum-like surface might be thrown off.

The favorable tendency of the experience afforded by the former case was corroborated by the fact that at this time the tumours in the breast were considerably reduced, although the gland in the axilla and its connecting absorbent vessel could still be felt.

The general treatment was but little varied. An alterative every other night, with the alkali in liquid extract of sarsaparilla; and glycerine was ordered to be rubbed on the part night and morning.

After an interval of six months we again saw the case. The surface of the breast had returned to its natural state, the patient describing that it had faded away gradually. Similar appearances had, however, shown themselves in various parts of the person—one on the inside of the left upper arm and others on the thigh: there was exactly the

same ivory-looking surface, and the same vascular margin. Thus all apprehensions subsided of anything more serious than a simple cutaneous disease, the alarming concomitant of the tumours in the breast having been plainly the result of the delicacy of the organ in which it first appeared.

The progress of the case afforded satisfactory evidence of the correctness of Mr. Ure's first opinion, formed as it was upon reasoning in the absence of experience. It also appears to me that, though there was no obvious throwing off from the edges of the scar, as the curative process anticipated by Sir Benjamin Brodie, yet that this very course of cure in all probability did take place may easily be supposed, and that the continued friction by the hand in applying the glycerine may have gradually removed small portions of the dead skin from the surface, as they became ready to be displaced by such mechanical means. It is only under some such supposition that we can understand how a skin so disorganised could have reassumed its natural vascular state.

Judging from the result, and from there never having been any apparently ulcerated surface, Sir Benjamin Brodie entertained doubts of the correspondence of the disease with that of the state of dry gangrene, to which he had to a certain extent compared it in its carlier stage.

This case is at least a rare one, since it has not come within the observation of men of large experience, and is not noticed in any works on skin diseases. The characters are somewhat analogous with those of squamous diseases, although one of the distinguishing marks of squamous diseases is absent, viz., the red spots with which the cruption commences. Another peculiarity of some of the squamous diseases, viz., the commencement of the healing process from the centre of the diseased surface, did not also occur. The chief point of similarity is the ivory-like state of the cuticle, in some degree analogous to a large scale.

To propose an explanation of the progress of the disease, I should suggest that the extreme vessels of the true skin appear at some commencing point to have undergone a state of engorgement. This state of engorgement is distinctly

xxxvii, 2

noticed at the margin, which we may suppose to be an extension of the original point; from some cause, consequent on the engorgement, the healthy nutrition of the part appears to have been cut off, and the extreme vessels to have remained incapable of carrying blood. As the portion of destroyed vessels increased, the engorgement has continued to spread outwardly around it.

This outward spreading by an enlarged concentric margin is precisely similar to that of one of the squamous diseases (lepra). We cannot, however, trace the same process of a return to a healthy state as we do in lepra, in which last the renewal commences from the centre, where the disease originally began. In the case before us the scale remained entire, and disappeared by an almost imperceptible process. It is probable, had the case been left without local treatment, instead of the diseased cuticle being rubbed off by glycerine, it might have scaled off, as suggested by Sir Benjamin Brodie.

This point remains for future observation, on which account, as well as that it may be properly classed and recognised, it is desirable that any recurrence or variety may be communicated by the members of this Society.

OF

MOLLITIES OSSIUM,

PRECEDED BY

DEGENERATION OF THE MUSCLES.

BY

THOMAS K. CHAMBERS, M.D.,

PHYSICIAN TO ST. MARY'S HOSPITAL.

Received Jan. 26th.—Read Feb. 14th, 1854.

Mary G- was admitted into St. Mary's Hospital, under my care, March 26th, 1852. She was twenty-six years of age, unmarried, and had never been able to follow any avocation, on account of weak health. She was about four feet ten inches high, and six stone seven pounds in weight, not emaciated, and of symmetrical figure. A waxy, vellow complexion, with bright scarlet colour in her cheeks, gave her the aspect of a delicate person. No history of hereditary disease of any kind could be elicited from herself, or from enquiries made at her native village. The ankles were edematous, and she walked slowly, as if from languor, on a flat surface; when she attempted to ascend steps or to raise herself from a stooping posture, defective power in the muscles of the haunch and thigh became very evident. The flesh of the whole body was exceedingly soft and flabby, the calf hanging down in the baggy way that it does in emaciated persons. She stated that she had first become an invalid seven years previously, her illness commencing by weakness and pain across the loins, especially at the end of the short ribs on the left side. The same symptoms had continued. with occasional variations, up to the date of admission. She

20 CASE OF

usually felt worst in early spring, and got better during summer and autumn. The bowels were somewhat costive; the catamenia generally regular, but occasionally postponed for a fortnight beyond the customary time. The urine, examined on admission and frequently while she was in the hospital, was variable in quantity, and variable in specific gravity, in proportion to its quantity, from 1.020 to 1.028. It was sometimes neutral, rapidly turning alkaline; but generally acid, depositing a considerable sediment of lithate of ammonia, soluble in heat. In all cases, boiling immediately threw down a cloud of phosphates, soluble in mineral acids, and showed the absence of albumen.

With the exception of a stitch under the short ribs of the left side, caused by turning in bed, and a sense of great debility in the back on standing, there was no pain experienced at any time, either with or without pressure.

The patient remained in the hospital, taking steel, for five weeks, without any change in the symptoms except the disappearance of ædema and improvement of appetite; after which she left at her own desire. She returned in three weeks, and again remained under observation for ten days, when she was advised to go to the seaside, and left with the expressed intention of doing so. During her residences at St. Mary's, the bones of the back and limbs had been carefully examined several times, without any deviation from the natural state being discovered, except that the ribs on the right side, viewed from behind, were not quite symmetrical, being more prominent than the left. On her going away, I told her of the difficulty experienced in arriving at a diagnosis, and desired her to let us know when any medical man could discover the nature of her complaint.

From St. Mary's she went to St. George's, and was under the care of Mr. Cutler for about six weeks; after which she left at her own desire. The symptoms continued equally obscure at St. George's, and no diagnosis of the case was formed till one night spontaneous fracture of the left femur occurred. She was then removed to her home, at Islip, Oxfordshire, and placed under the care of Mr. Blick. She informed him of the wish I had expressed to learn the result of the case, and through his kindness I am enabled to detail the remainder.

It appears that when he saw her on the 11th of August, 1852, a fortnight after leaving St. George's, fracture of both femora had taken place in the upper third of the bones. Obtuse angles were formed at the seat of fracture, by the thighs being drawn upwards and outwards, and twisted on themselves, so that the external border of each foot lay on the bed, and the soles approximated to one another. The only parts of the lower extremities capable of voluntary motion were the toes. The shin-bones felt soft on pressure, producing a sensation to the finger described by Mr. Blick as like that of a fibro-cartilaginous tumour. She breathed, ate, drank, slept, excreted fæces, urine, catamenia, as well as usual; taking meat, wine, and beer, but refusing medicine. She had no pain, except when the tumefied parts about the fractured ends of the bones were touched, and those were excessively sensitive. No important change seems to have occurred-except that the body kept shortening, and the leg-bones getting softer, so that the foot could be raised three or four inches from the bed without altering the position of the knee-till April, 1853, when the right arm became painful to the touch and paralytic.

In May, the same misfortune happened to the left upper extremity also.

In June, the pelvic arch gave way, the mons veneris being drawn upwards and the anus thrust forwards, the alæ of the ossa ilii falling inwards.

In July, the ribs on the right side gave way, and she began to suffer much from dyspnœa and cough, with quick pulse, fever, and restlessness.

In August, the bones of both arms were found quite soft. In September, the ribs on the left side fell in, and she was now much distressed by increased dyspnæa and palpitation of the heart. The contractions and dilatations of that organ were distinctly visible through the fleshy parietes. The lower jaw and bones of the skull also felt soft on pressure.

22 CASE OF

Towards the end of October the distortion of the lower parts of the trunk was so great, that the faces could not be naturally expelled, and had to be removed by mechanical means.

She at last died of dyspnæa, on the 6th of November.

Several times during the illness, Mr. Blick sent me some of the urine secreted by Mary G—. It presented always very similar physical characters to that passed in St. Mary's. Whilst acid, the microscope showed a great quantity of lithate of ammonia, vesical epithelium, and a few crystals of oxalate of lime. After it became alkaline, there were to be seen in it a number of yellow spherules, some of them furnished with thorn-like processes, which Dr. Hassall informs me he considers to be uric acid in combination with an earthy base. There was also a large quantity of vesical epithelium, numerous crystals of triple phosphate, and a few stelle, pronounced by Dr. Hassall to be phosphate of lime. A quantitative analysis of this urine, by Dr. Beale, gave the following result:

	Urine	of	Mary	G—			1100	althy	Urine	(Be.	rzelius).
Water .						971.00					933.00
Solid Matter						28.10				•	67.00
			In 100	Par	rts of	Solid Me	itter.				
Urea .											
Extractives											
Lithic Acid											
Earthy Phosp	hates					3.3					1.4
Fixed Alkalin	e Salts	3.				41.9					25.9

It will be seen, therefore, that the solid matters of the urine were diminished below the natural standard by more than half, and that this diminution was due to deficiency of animal matter; that the alkaline and earthy salts were nearly doubled in amount, the principal comparative augmentation taking place in the earthy phosphates.

After death, the body was found to have shrunk from four

feet ten to three feet one inch and a half, and could be rolled up upon itself, to use Mr. Blick's forcible expression, "like an ill-stuffed bolster." No examination of the viscera was made, but portions of the tibia, sartorius, and rectus femoris muscle were removed, and a sharp instrument passed into many parts of the bony skeleton, which was found universally soft and unresisting.

The section of tibia sent to me was of the colour of muscle, soft and friable throughout, presenting to the knife scarcely more resistance than brain, and retaining its shape solely by the aid of the tough periosteum. No remains of bone could be felt except on cutting the periosteum, where a slight grittiness was perceived on making a section with sharp scissors for microscopical examination. Under the microscope, the whole of the bone, to within half a line of its external surface, was seen to consist of large fat-vesicles, containing, some white, others a reddish oil, and thus accounting for the colour of the texture, with the intervals between them filled up with spherules of various magnitude, mostly about as large as blood globules, of a dull red tinge. They were formed apparently of aggregated grains, and some had an indistinct nucleus. No fibrous structure could be detected in this situation.

The part next to the periostcum, which felt gritty when under the scissors, exhibited, when examined under a quarter-inch lens, small islands of opaque bone, which, however, did not retain a perfectly healthy appearance; the bone corpuscles being indistinct, and the caniculi not to be discerned. These islands were surrounded by some structure more transparent, and that again bounded by a reddish fibrous structure, in which were oil globules of various sizes, and a few oval fat-vesicles towards the inside. The addition of hydrochloric acid caused a slight disengagement of gas.

The portion of rectus muscle was, to the naked eye, of the natural colour, but of too homogeneous an appearance. Under the microscope, it presented no traces at all of fibrons structure, or even linear arrangement. It had become a mere con-

geries of fat-vesicles, the interspaces between which were filled up with globular granular corpuscles of various sizes, estimated by Dr. Seiveking as from 1102/1000ths of an inch in diameter. Many of the larger had a granular nucleus.

The circumstances which have induced me to lay this case

before the Society are the following:

1st. The portrait which is afforded of an early stage of the disease—a stage at which it is rarely the subject of observation.

2d. The impression produced by it upon my mind that the degeneration of the bones was preceded by that of the muscles—that the degeneration of the two tissues was dependent, in this instance, on the same crasis, and the probability, therefore, that such is its history in other cases also.

3d. The opportunity of placing on record a careful quantitative analysis of the urine in this disease.

4th. The fact of the degeneration being least advanced in the external circumference of the bone.

5th. The formation of perfect fat vesicles in both bone and muscle.

As respects the symptoms which precede the known softening of the bones, attention may be called to the absence of those rheumatic pains which are usually stated to be precursors, nay by some supposed to be the actual causes of the malady. When the disease is fairly established, these pains may conjecturally be referred to the pull which healthy muscle exerts on the periosteum, deprived of its usual firm base of resistance. But, as in the case before us, the muscle appears to have yielded first to the morbid influence, it did not strongly contract, did not drag on the periosteum, and so no pains of consequence were experienced. We see, also, that previous to the softening being demonstrated to exist, the same appearances were noted in the urine which were observed when the disease was fully established, pointing to a great probability that the chemical constitution was not dissimilar. We see also that the degeneration was purely automatic, not arising as a consequence of any other morbid state, nor, as far as could be ascertained, of an hereditary taint.

That the degeneration of the muscles preceded that of the bones is of course a matter of opinion. A person observing the circumstances only after death, would naturally suggest that it was due to their necessary inertness for so many months. But the condition of the patient during her stay at St. Mary's discountenances this idea. The mechanism of the bones was complete so far as their ordinary uses demand, yet so peculiar was the partial paralysis, or rather torpidity of fibrous contraction, that, in spite of the rarity of the disease, I was induced to select fatty degeneration of the muscles as the only explanation I could give.

As respects the quantitative analysis of the urine, it is confirmatory of the suspicion usually expressed, though not hitherto proved, that a great loss of lime takes place through this channel.

The observation that the degeneration was least advanced in the external surface of the bone, shows that its course is from within outwards; and that, therefore, till the shell of osseous structure bends or breaks, the bone is as useful as ever for the purposes of muscular motion. The mere thinness of the plate of bone remaining intact can make no difference mechanically to the action of the muscles implanted in it, so long as it is strong enough to bear the strain. It will be seen that this last argument has an important bearing on the first observations made concerning the early diagnosis of the disease.



KELOID OF ALIBERT,

AND ON

TRUE KELOID.

BY

THOMAS ADDISON, M.D.,

PHYSICIAN TO GUY'S HOSPITAL.

Received Feb. 16th .- Read Feb. 28th, 1854.

The term *keloid*, or *kelöide*, the name given to the singular affections of the integument about to be described, has been variously interpreted; some deriving it from $\kappa\eta\lambda\eta$, a tumour; others, in reference to certain supposed resemblances, from $\chi\eta\lambda\eta$, a crab's claw'; or from $\chi\epsilon\lambda\nu c$, a tortoise; whilst others, apparently with much greater propriety, derive it from $\kappa\eta\lambda\iota c$, 'quasi ustione facta macula,' the disease in every instance presenting a greater or less resemblance to some one of the diversified effects left by a burn.

The more immediate object of this very slender communication, is to show that the keloid originally described by Alibert, and now so generally recognised, is altogether different in its mode of development, character, and progress, from another disease occurring in the same tissue, and to which, with much greater aptitude, the term keloid may be applied, if we are to regard resemblance to the effects of a burn as its correct interpretation; for I think it will be shown, that whilst the keloid of Alibert and others can hardly be regarded otherwise than as a fibrous tumour developed in the subcutaneous areolar tissue, the other form of disease to which I have alluded, although originating in the same tissue, is of a character and leads to consequences

widely different. In order, however, to illustrate and confirm this proposition, it will be necessary to give a description of both diseases; and in so doing, I will, as far as possible, avoid trespassing too much upon the time and attention of the Society.

I propose distinguishing the two diseases in question by the terms "Keloid of Alibert," and "True Keloid."

KELOID OF ALIBERT.

I have given the name "Keloid of Alibert" to this form of disease, because I believe Alibert to have been the first to discriminate and accurately describe it. In his celebrated work, 'Description des Maladies de la Peau,' will be found a very accurate representation of it, executed with all the artistic skill, and perhaps a little of the exaggeration of colouring, for which that work is so remarkable. He there suggests its holding a middle place between what he so vaguely and indiscriminately calls "dartre" and cancer, and was led in consequence to give it the name of "cancröide," like cancer; further justifying the appellation, however, by comparing, as others have done, the claw-like rays or processes of the extending disease to the claws of a crab. Since the period of Alibert's original publication, several other writers have furnished cases and commentaries to illustrate the character, progress, or pathology of the disease. Amongst these we find the names of Biett, Velpeau, Cazenave, Coley, and others; but by far the most complete and elaborate essay on the subject has only lately been written by Dr. Dieburg, of Dorpt, and published in the 'Deutsche Klinik' at Berlin, and for a knowledge of which I am indebted to my colleague Mr. Birkett and Dr. Whitley.

The keloid of Alibert first appears in the form of very small, hard, shining, tubercular-looking elevations, of a round-ish or oval shape, somewhat firmly set, of a dusky or deep red colour, and generally attended with itching or pricking, shooting or dragging pains in the part. These tumours slowly increase until they attain a height of two or three

lines, and comprise an area varying from that of a horse-bean to that of a small almond. So long as they continue to be abruptly prominent, the summit, or even the entire surface of each tumour, instead of remaining uniformly red, not unfrequently presents a pale or blanched appearance, as if from pressure of the increasing tumour upon the cutis situated above it, and which might at first sight be mistaken for some sort of fluid effusion. On close inspection, however, it is found, that so far from this being the case, the tumour displays a hardness, firmness, and elasticity, which almost convey the notion of so much fibro-cartilage, to which indeed it has been not unaptly compared. After an uncertain period, these hard shining tumours become broader, of more irregular outline, and occasionally slightly depressed in the centre. At this time, and sometimes even earlier, by the aid of an ordinary magnifying glass, or by the naked eye, delicate whitish tendinous-looking lines may be perceived, stretching across the surface of the tumours, mingled with minute blood-vessels of a bluish, purplish, or pinkish colour. The extension of each individual tumour now seems to be effected by certain tapering claw-like processes of seldom more than from half a line to a line in breadth, and probably from a quarter of an inch to as much as an inch in length, proceeding from the edges or angles of the expanding tumour. These claw-like processes appear to produce a puckering of the skin; and, as it were, draw the healthy integument into which they pass, towards the original excrescence, and within the influence of the local changes; appearances, nevertheless, which are probably the mere consequences of the stretching and dragging of the integument occasioned by the increasing size of the tumour beneath.

The slow and gradual increase of these tumours may proceed for months or years, and at last attain a size of an inch, an inch and half, or two inches in length, as much as half an inch or an inch in breadth, and probably an elevation of three or four lines above the level of the surrounding skin. There may be but a single tumour, or there may be several: when more than one, they may be congre-

gated together in the same neighbourhood, or may occupy parts of the integument remote from each other: when of the largest size, the tumour may so stretch and attenuate the integument as actually to protrude beyond it, exposing a red shining excoriated looking surface. The development of the tumour is occasionally preceded or accompanied by heat, and some degree of puffiness or tumefaction of the surrounding parts, but without redness or other discoloration; a state of things, indeed, which may temporarily supervene at any period of the disorder, either in consequence of some accidental cause of general excitement, some irritation applied to the tumours themselves, or spontaneously, and without any very appreciable cause whatever.

From the very commencement, as has been already observed, the disease is attended with itching and pricking sensations, which, as the former increases, are aggravated to a sense of constriction, or to severe pricking or stabbing pains, which prove extremely distressing to the patient. Under such circumstances, pressing or handling the tumour is loudly complained of; the sufferings of the patient, if a female, are not unfrequently such as to harass her during the whole of the day, and almost completely to deprive her of rest at night.

The morbid deposit which essentially constitutes the keloid of Alibert, takes place in the subcutaneous areolar tissue, between the cutis and adipose membrane. The occasional heat and tumefaction of the neighbouring integument, as well as the itching pain and redness of the tumour itself, sufficiently attest that the morbid process is at least accompanied by a degree of vascular excitement nearly allied to inflammation, an inflammatory state which, it would appear, gives rise to a certain amount of adhesion amongst the meshes of arcolar tissue around; and, as we know that tumours of considerable size may be developed in the subcutaneous arcolar tissue without either uneasiness, pain, or any very obvious change in the appearance of the skin itself, I am inclined to attribute to this accompanying inflammatory and adhesive process, the fixed condition of the tumour, the

great vascular injection of the superincumbent skin, and the intensity of the local pains, as well as those remarkable puckerings of the integument which attend the increase of the tumour, and constitute the claw-like processes from which some have derived the name "keloid."

The disease most frequently attacks females from the age of 18 to 35 or more, and in a large majority of instances is found situated near the sternum, between or upon the mammæ; it nevertheless occasionally affects the male, and in both sexes has been known to occur on other parts of the body, as the arms, shoulders, neck, belly, or even the head or face. Alibert, as already observed, considered it in some way allied to cancer; an opinion unsupported by any facts with which I am acquainted; whilst others, with perhaps no better evidence, have attributed the predisposition to a scrofulous taint. The development of the disease in different parts of the integument at the same time, or in succession, and its almost certain recurrence after extirpation by the knife or by caustics, clearly point to some peculiar constitutional condition; but what that condition is remains to be ascertained. All that we at present know respecting the exciting cause of the disease, amounting to no more than the fact, that, instead of arising spontaneously, on parts to all appearance previously sound, as is commonly the case, it has not unfrequently been observed to be developed upon and apparently excited by a cicatrix, as of a burn, a boil, or a recent wound, such as that inflicted by the punishment of flogging. To the disease, when occurring under the latter circumstances, Alibert, in a subsequent work, applied the term spurious or false keloid—the cicatrir keloid of Dicburg—a form of the complaint, however, which is sometimes altogether painless.

CASE 1. (Pl. 158⁵⁰, Model 231¹⁰, 231¹¹)¹ reported by Mr. Pratt.—Susannah Black, et. 18, a single person, who has been residing with her mother, at Snowsfields, was admitted on the 6th October, 1853, having been transferred from

¹ The references are to plates and models in Guy's Hospital Museum.

No. 5, Mary, by permission of Dr. Babington, under whose care she had been since the 14th ult.

She is below the middle height; has dark hair, eyes, and complexion; a narrow forehead and heavy expression; but seems intelligent and is highly hysterical, and was formerly apprenticed to a laundress, but not strong enough to continue this occupation.

Her catamenia first appeared at the age of 15, and have recurred regularly since, generally continuing about three days, but with pain in the back and loins, and during the last two years with clots, sometimes of the size of a shilling.

Her father died of diseased heart, but the other members of her family are healthy, and none of her relations have ever suffered as she now does.

She is marked by the smallpox, which she had when three or four years old, but does not look unhealthy, and states that she was always in good health until about two years ago, when, from exposure to cold at Gravesend, while lightly clad, she first became ill, with pain in her head and right side, and at the scrobiculus cordis, shooting thence to the back. Six weeks after this, in Berkshire, having been gradually getting worse in the meanwhile, with loss of appetite and increase of pain, which for a time was so severe as to keep her in a bent position, but occasionally left the scrobiculus cordis and appeared in the loins, she suddenly vomited about a pint of dark clotted blood, after which she became better, but did not lose the pain in her back, and suffered from palpitation of the heart. About three months after this, having returned to London in the interim, the vomiting of blood recurred, and from this time was repeated at intervals, sometimes of two or three months, at others of two or three weeks only, until a few days before admission; and once in the hospital, about two weeks since, she brought up a teacupful of blood.

About twelve weeks since she had a gathering in her right breast, which discharged a small quantity of matter; two weeks after, and just as this was healing, her neek, chest, and both breasts swelled a good deal, with a dull

aching pain, but without œdema; one week after this, or two or three days after the swelling had subsided, she first noticed two small red pimples on the right breast, at its upper and inner part, which were painful, with a pricking sensation, and tender. Then, about one week after, two other similar raised spots, appeared on the left breast, at about the same position, but not symmetrical, and then two smaller ones above these; these all gradually increased in size; but in varying degrees, and, as they did so, at certain stages of their existence became white (?)

There are at present two raised spots on the right breast, nearly oval in shape, and of considerable size; four on the left breast, two large and two small; one on the upper part of the sternum; several at the upper part of the abdomen; and one on the left shoulder; and a cluster of equivocal white spots at the lower part of the back on the right side.

They seem to be in every stage of existence; some small, red or white; others of varying size, more vascular, generally of a red colour, and marked with small venæ, and traversed by peculiar white lines; but they all change colour occasionally (?) from white to red or even purple, and have a peculiar, firm, and unyielding feel. They have always a dull and aching sensation, converted into a more acute pricking pain by pressure; are more or less raised above the level of the surface, the largest as much as one eighth of an inch, or even more; have irregular margins, much resembling the contraction of a cicatrix, and appear to increase in size by an extension of the white lines which traverse them into the surrounding tissue, like feelers, to which, indeed, their irregular margins are due.

Her chest is well formed, her nutrition good; she seems to be subject to boils; has old cicatrices of venesection on each arm, and a small hard nodule on the left side of the neck, just above the sterno-clavicular joint, resembling an enlarged gland. Her tongue is white and moist; her pulse 80, full and regular; her countenance rather flushed; her bowels, which have been much relaxed, now act about three times daily, the motions being very loose; her appetite is bad;

she complains of pain in her head, across the top. The sounds of respiration and of the heart are normal, as well as the resonance of the chest on percussion, but the heart's impulse is strong and heaving, and the pulsations of the aorta felt above the sternum.

Case II (Model 229, pl. 158⁵⁷, pl. 158⁵⁴), furnished by Mr. Whateley, surgeon, of Berkhampstead.—William Garrett, at. 37, applied to me, about May, 1851, with a small tumour on the skin of the left breast, slightly elevated above the surrounding skin, silvery red in appearance, exquisitely tender, and about one inch in diameter. I recommended its removal, to which he would not then consent. On seeing him about a month afterwards, there was a second appearing, about an inch from the first, and subsequently a third. Such being the case, and fearing that others might still appear, I did not think it advisable to press the operation. He was then sent to Guy's Hospital, at the request of the late Bransby B. Cooper, Esq., in order that a model, &c., might be taken of the tumour in its theu state.

After remaining some time, he again came into the country, and was under my care at the West Herts. Infirmary.

The tumour still continuing to grow, and the three having coalesced into one, and having no appearance of any fresh growth in the neighbourhood, I again advised an operation, to which he consented, and I removed it on the 10th of May, 1852, removing with it about a quarter of an inch of the sound skin all round, and fully down to the bone. The wound was dressed with warm water dressing and oil-silk, and was cicatrized. The cicatrix is now sound, and the man in good health.

The tumour, when freshly cut through, in structure, colour, and appearance most nearly resembled a cow's udder.

The slight sketch, No. 4, represents the result of a microscopic examination of the tumour, made, however, under very unfavorable circumstances, by Dr. Habershon, of Guy's Hospital.

A more minute and careful examination of a keloid

tumour has been supplied by Dr. Dieburg, of whose account of it the following is a translation:

"On section we observe a dull white colour, a dense tissue in which fibrous structure is visible to the naked eve, and a creaking sound is produced by the knife. On pressure, no fluid exudes in most cases; in a few, a watery fluid is seen, sometimes reddened by blood. This is characteristic, as different from the 'tumores verrucosi cicatricum' of C. Hawkins, from which a peculiar fluid may generally be expressed. Microscopical examination shows the different stages of development of the cells and fibres. We distinguish-1. More or less rounded bodies, the largest 0.05 of a millimetre; in their interior, we see a nucleus, and frequently other molecules. 2. Cells elongated in the direction of one of their diameters, in great numbers: they seem to constitute a characteristic element of all the tumours of 'cicatrix-keloid' (spurious keloid of Alibert). These cells, called by Follin 'elliptical bodies,' are rounded at their extremities, and their sides present central bulging. These cells are about 0.01 millimetre in breadth, and 0.06 in length. They contain a nucleus easily distinguishable by its brightness from the dull surrounding parts. 3. Spindleshaped bodies, bulging in their centre, and having long, waving appendages. 4. Fibres of cellular tissue and clastic fibres. The fibres of cellular tissue are formed into bundles, which cross each other, and constitute a pretty dense web. The elastic fibres are less numerous and larger than the latter, and are not easily seen without immersion in acetic acid. When a slice of keloid in an early stage of development is placed under the microscope, it is found to consist almost entirely of the spindle-shaped bodies; at a somewhat later period these are seen to have lost their nuclei, and assumed a fibrous appearance: this is most frequent. At a still later period, we see distinct fibrous bundles, crossing each other, and by immersion in acetic acid, the elastic fibres become visible. The whole is nourished by a comparatively small number of blood-vessels. The surface is covered by a very thin layer of epidermis, consisting of tesselated cells, very

closely pressed together, which require softening before they become visible under the microscope."

The following translation from M. Labert's 'Traité practique des Maladies Cancereuses, et des affections curables, confondues avec le Cancer,' will probably not be considered out of place.

"Among the cases of spontaneous and multiplied keloid that we have observed, there were two especially curious, in consequence of their multiplicity and extent. In one case, under M. Velpeau, at "La Charité," the whole pectoral region of one side was covered with these tumours; many of which were sufficiently large to have reddened and croded the surface of the skin at their borders.

"In the second case, a child at. 10½, had a very great number of keloid tumours, developed upon its back, red on their surfaces, and which had formed in the cicatrices which were consecutive to numerous applications of caustic potash, applied to the poor child by a charlatan, who promised to cure, by this method, a scrofulous disease under which the child laboured."

I may add to this passage from Lebert, the fact, that I have myself very recently been consulted in the case of a young lady of about eighteen years of age, upon whose back, shoulders, and breast, I counted as many as thirty keloid tumours. I was told that they originated in the cicatrices of boils which broke out about six or seven months before. From the situation, it had been a case probably of acne.

In regard to treatment little can be said. Various internal and external remedies have been tried in vain; and when extirpated by the knife or destroyed by caustics, the disease has, I believe, very generally returned on the seat of the original disease. When, however, the disease has been first developed in a cicatrix—the spurious keloid of Alibert—extirpation has proved more successful, the disease not having again made its appearance in several instances. It has indeed been asserted that the keloid tumour may subside spontaneously, leaving behind a white and depressed cicatrix; but I

believe this to be extremely rare, and is in itself a very improbable event, after the tumour has attained any considerable size.

TRUE KELOID.

What I have ventured to call "True Keloid" presents a very remarkable character, and leads to much more serious consequences than the keloid of Alibert. It is a disease, too, which, so far as I know, has not hitherto, with the exception of a slight allusion of Dr. Coley, been either noticed or described by any writer. Like the keloid of Alibert, it has its original seat in the subcutaneous arcolar tissue, and is first indicated by a white patch or opacity of the integument, of a roundish or oval shape, and varying in size from that of a silver penny to that of a crown piece, very slightly or not at all elevated above the level of the surrounding skin, and probably unattended, in the beginning, with pain or any other local uneasiness or inconvenience, although a more or less vivid zone of redness surrounding the whole patch, or a certain amount of venous congestion in its immediate vicinity, sufficiently attests the vascular activity or inflammatory process going on in the parts beneath. Oceasionally, and especially when the original white patch is of considerable diameter, its surface presents here and there a faint yellowish or brownish tint communicating to the whole spot a somewhat mottled appearance. The slow and insidious change taking place in the areolar tissue either stops and the spot disappears, or it proceeds, and at length begins to declare itself by a feeling of itching, pain, tightness, or constriction in the affected part, and frequently by a certain amount of subcutaneous hardness and rigidity, extending beyond the site of the original superficial patch, although as yet without any necessary change in the appearance of the superincumbent skin. This hardness and rigidity can be distinctly felt, and, especially when situated on the extremities, may sometimes be traced along the course of the neighbouring tendons or faseiæ, or stretching like a

cord along the limb, so as to bend or shorten it, and even interfere with natural progression. At length the part originally affected becomes more or less hide-bound, and a similar change taking place around the more superficial fasciæ and tendons, the latter become so tightened, fixed, and rigid, as to be no longer capable of performing their proper functions, and to such an extent, that the whole of a limb, but especially the fingers, may be permanently contracted, bent, and rendered almost as hard and immoveable as a piece of wood; thereby impeding progression, distorting the gait, and making the patient, a poor miserable cripple for the remainder of his life.

As these changes proceed, the patient continues to experience itching, pain, or a sense of tightness or constriction of the parts, till at length the disease begins to tell upon both cutis and cuticle. The skin, which may have previously presented only a slightly drawn or puckered look, imparting, to a greater or less extent of it, a ray-like appearance, now shrinks or shrivels; it assumes a dry. smooth, or glistening aspect; it undergoes a more decided change of colour, becoming reddish, pinkish, vellowish, or of a dead leaf colour; the cuticle exfoliates; the cutis manifests a tendency to superficial ulceration or excoriation, with consequent scaliness or scabbing, or, when not excoriated, is occasionally surmounted by obscure tubercular or nodular elevations—the whole appearance very closely resembling the remains of an extensive and imperfectly cicatrised burn, From some part of the boundary of the discolored and shrivelled skin, there may now and then be seen reddish, elevated, claw-like processes, of from half an inch to two inches in length, extending into the sounder integument, and bearing a very exact resemblance to those mentioned as being so characteristic of the keloid of Alibert. It must also be observed that, during the progress of the disease, it is by no means uncommon to find, scattered over various parts of the apparently sound surface, certain oval or roundish and flattened tubercular-looking elevations, which are somewhat hard to the touch, about the size of a split

pea or horse-bean, and without any other discoloration than what appears to be the result of accidental friction or irritation.

The above description of true keloid clearly points to some morbid change slowly taking place in the subcutaneous areolar tissue, whilst the itching, pain, and uneasiness experienced by the patient, the red zone surrounding the patch, and the injection of the neighbouring veins, as well as the subsequent appearances presented by the parts affected, would indicate that the morbid process going on in that tissue is one very nearly allied to inflammation, probably of a strumous kind. It would also appear that the inflammatory product, by its subsequent contraction, seriously interferes with the proper nutrition of the cutis, fixes it more or less firmly to the parts beneath, and, when deposited in the immediate neighbourhood of fasciæ and tendons, may, probably, after the lapse of months or years, lead to all those serious inconveniences which I have already described.

I will not abuse the patience of the Society by entering into any speculations respecting the origin and essential nature of this very singular disease; neither is it necessary to dwell upon plans of treatment, further than to observe that, with the exception of iodine, none of the many remedies tried, seemed, in extreme cases, to make the slightest impression upon either the appearance or the progress of the disorder. In one instance, however, less advanced, iodine, taken internally, with the simultaneous application of iodine ointment to the affected parts, did appear to arrest the advance of the local changes, and somewhat lessen the rigidity of the affected tendons. Whether the preparations of iodine administered at a very early period of the disorder would prove more effectual, I have had no opportunity of ascertaining, although I am inclined to entertain a strong opinion in its favour.

The following case presents an example of the disease in its earlier stages:

Case III (Models 222, 223, 224, Pl. 158⁵²), reported by Mr. Towne.—Eliza Watkins, a young woman between 19 and 20 years of age, of ruddy complexion, fleshy and well looking, with light eyes, and hair tending to red, presented herself amongst the out-patients of Guy's Hospital early in June last.

She was in the situation of lady's-maid, and had for some time been residing at Cheltenham. Her general health was good, and at this time apparently undisturbed. She had been suffering from pain and stiffness in the left arm and left leg, for which she was now seeking relief.

The first appearance of the disease had been noticed twelve months previously, when a small white spot, about the size of a shilling, was observed on the left side; but, as neither pain nor inconvenience accrued, no anxiety was felt with reference to it until about eleven weeks prior to her appearance at the hospital, when she first became sensible of pain, attended with a dragging sensation in the left arm and left leg, both limbs being affected simultaneously. Medical assistance was now called in; poppy fomentations were ordered, and for some time persisted in; the disease still making slow but steady progress.

The lady with whom she was living, having occasion to visit London, brought the young woman with her, and took the opportunity of having a second opinion. The case was now treated as a sprain; but the patient, not feeling satisfied, determined to come to the hospital.

The two limbs were in a very similar condition. At this time they presented to the eye but slight indications of the disease, which principally consisted in a hard, drawn, tight look, on the limb being extended; there might, however, be felt, through nearly the whole length of both arm and leg, a rigid band, which gave to the touch the impression of some inelastic substance tightly strained under the integument.

The shoulders presented a mottled appearance, and had several whitish patches interspersed with numerous small tubercular-looking growths. There also existed a chain of

spots which nearly surrounded the right nipple, and several others about the neck and breasts. The spot on the left side (described as the first appearance of the disease) had now attained the size of a five-shilling piece, and had thrown out a band upwards towards the cartilage of the ribs, and a second descending towards the pubes.

During the second week in August, I again saw the patient. The pain in the arm and leg had much increased, with "a feeling of shortening" in the limbs affected; and, after sitting for some time, it was with difficulty the foot could now be extended. The band down the arm had become more distinctly expressed, had assumed a slightly tendinous and glistening character, and had thrown out several small lateral processes. A fresh spot had appeared on the upper lid of the left eye, and a second on the outer side of the right leg. Those on the shoulders had become more evident; the larger one had increased in size, become yellowish in colour, glazed on its surface, was hard to the touch, and did not move freely with the surrounding integument.

The next case exemplifies a more advanced stage of the disease:

Case IV (Model 225, Pl. 15846), reported by Mr. King.—Louisa Burston, et. 11, was admitted, under Dr. Addison, December 8th, 1852.

The patient, who is a very strumous-looking subject, was very strong and healthy as a baby, but was noticed to be slightly ricketty when she began to walk; this was between eighteen months and two years of age; but when she was three and a half or four years old she had nothing remarkable about her.

From this time her mother always considered her delicate; but, beyond frequent attacks of ophthalmia, which have deprived her of most of her eye-lashes, and appear to have been of a strumous character, she has never suffered any decided illness.

Attention was first directed to the right thigh, about

fourteen months ago, on account of complaints on the part of the child of itching in that situation; and this appears to have been so intense, that measures were taken, by tying her hands, &c., to prevent her flaying herself. When first examined, red spots, like flea-bites, were observed thickly studding the inner part of the thigh, about its middle third, but not imparting any feeling of elevation to the finger.

This condition lasted about a fortnight, and was then succeeded by a flaky desquamation of the cuticle, which persisted for two months, during which time the itching continued to be almost intolerable, and when the part was scratched the spots before alluded to would reappear. About or soon after this time the part began to feel thickened, puckered, and hard, and gradually assumed its present appearance.

On the right thigh, about one inch below Poupart's ligament, and nearer the spine of the pubes than the crest of the ilium, commences this singular appearance of the skin, which more nearly resembles the scar left by a burn than anything else. There is a strip, about one inch broad, nodulated and irregular on its surface, and discolored in a peculiar manner, being partly red, with a predominance of a light brown tint.

This strip of disease proceeds down the thigh, following the course of the sartorius muscle as far as the junction of the upper two thirds with the lower third of the thigh, at which point the most marked discoloration of the skin ceases; but it is found, by examination with the finger, that the same condition of the cellular tissue follows the sartorius to its insertion, and also appears to involve the tendons of the internal hamstring muscles.

In the lower part of the same leg the cellular tissue over the anterior part of the ankle appears to have become involved, and, in particular over the internal mallcolus, the integument is firmly attached to the bone.

She has at the present time no peculiar sensation in the affected parts, nor is the use of her leg in walking at all impaired. Since she has been in the hospital she has taken various medicines, without the slightest perceptible effect.

The next is an instance of the disease in its most aggravated form, reported by Dr. Collingwood. (Model 228, 227, pl. 158⁵⁵, 158⁴⁵.)

Elizabeth Alexander, æt. 12, resides at Ellirsield, in Hampshire, where her father follows the occupation of shepherd. She has a comfortable home, plenty of wholesome food, and attends the village school. The following account is given by the gentleman under whose care she has been for some years.

"When I first saw Elizabeth Alexander she was about 4 years old, and was a robust, healthy child, and has been in good health up to the present time. When nine months old, she, whilst crawling about the house near the fireplace, touched a piece of hot iron with the left arm, between the elbow and wrist, which soon healed up, leaving a slight scar, not so large or deep as that produced by vaccination, and to my own knowledge she has had no other burn or scald. When seven years old she had a mild attack of measles, which was so slight that she was not confined to her bed for a day, and perfectly recovered from it. A few months after the measles, she had a white spot appear on her left side, below the breast, about the size of a fourpenny piece, with a brownish, hard, inelastic state of skin, about the size of a five shilling piece, surrounding the white spot, and looking. as though the skin had been scorched with hot iron, and I asked the question if such had been the case, and was assured by both mother and child that it was not; and in a few weeks I found the brown part of the skin extending to a large circumference, very much more thickened, puckered, and inelastic, giving no pain on pinching up the skin, or on pressure. About six months after, a similar spot made its appearance on the left shoulder, and from a note I made of the case twelve months after, the following were the appearances then presented.

"The shoulder had been affected for a year and a half.

About a year and a half ago a white spot appeared upon the shoulder, surrounded by a brownish discoloration, just as though it had been touched with a hot iron, not painful, or tender to the touch; it has gradually extended itself around the shoulder joint and down the upper third of the arm; the skin is shining, hard, and puckered, like the cicatrix from a burn, and the deltoid and other muscles of the shoulder are so diminished as to leave no appearance of their form; the skin thickened, and apparently adhering to the bone, with considerable loss of power and motion, and contraction of the arm.

"About eighteen months after, the hip (left) became affected exactly in the same manner as the side and shoulder. Two years after this, the right shoulder was the seat of mischief of the same nature as that already existing in the other regions."

From the above account, then, it appears that the disease commenced in the left hypochondriac region, next attacked the left shoulder, then the left hip; up to this time, upwards of four years from the first appearance of the disease, the right side was unaffected, while nearly the whole of the left side was contracted by it. About a year before her admission the right shoulder became the subject of this singular disease, and, on a careful examination I discovered upon her right thigh a small patch of puckered skin about as large as a sixpence, the right leg and thigh being otherwise free. Of the existence of this small patch the patient was ignorant, which was suggestive of its being the commencement of the disease in a hitherto sound part; but on careful watching, for a period of several weeks, it does not appear that it has increased in size, but rather to have diminished, and the patient affirms that whereas the disease has steadily increased as a whole, individual spots or small patches have made their appearance for a short time and have receded again.

On November 10th, 1852, she was admitted into Gny's Hospital, Lydia 18, under Dr. Addison, when she presented the following appearances. The right shoulder is contracted,

hard, and tuberculated, the muscles are wasted, and a strip of skin, about one inch and a half wide, extending from the back of shoulder to the inner part of the elbow, is bound to the bone. This part was formerly ulcerated, and the only part which ever was so. It now presents a scaly appearance, and is very hard. The left shoulder is more tuberculated, and more hide-bound, but the disease on this side is more confined to the shoulder proper, and does not extend far down the arm. On the front of each shoulder is a considerable patch, but the chest is otherwise free. Both the elbow joints are tightly contracted, and permanently bent at nearly a right angle, and the forearms and hands are considerably wasted. The fingers are nearly all bent inwards, and the hands are small, like those of a child six or seven years old.

From the lower angle of the scapula, a semilunar patch (the original disease) runs round to the mesial line, half way between the umbilicus and the nipples. A large irregular patch exists on the left side, immediately below the umbilicus.

The outside of the left thigh is affected throughout its whole length, together with the whole of the left buttock; the left calf is wasted, and measures two inches in circumference less than the right, while the right thigh measures two inches and three quarters more than the left. The left foot is contracted, and the ankle stiff; the toe is pointed downwards, and she walks upon the ball of the toe.

The right thigh is free from the disease, except a small irregular discoloration about as large as a sixpence, on the front of the thigh. These hard shining places have diminished sensibility, and never were painful. None other of the family ever was affected with the same disease. Her general health is excellent.

Case of Keloid disease. Furnished by John Birkett, Esq., surgeon to Guy's Hospital. (Models 220, 221, pl. 158⁵⁶.)

E. K-, æt. 31, a female, was born in Devonshire, lived

some years in the country, but the greater part of her life has been passed in the suburbs of London.

She married at the age of 15 years and 8 months, was confined with her first child at 16 years and 8 months, and never menstruated until after her marriage. She has given birth to eight children, all of whom she suckled with both breasts, although most with the left.

Of regular and temperate habits; she has of late subsisted, since the death of her husband, by working a mangle.

She has always enjoyed good health, with the exception of palpitation of the heart; and her aspect was formerly healthy. At present she is pallid and careworn, from anxiety, and a scanty means of subsistence.

I first saw this patient in July, 1851, through the kindness of Dr. Bossey, of Woolwich, who had watched the case.

In December, 1850, and whilst suckling her last infant, she felt an acute pain under the right arm, and observed a curious appearance in the skin of the part.

Now, July, 1851—six months from the discovery of the disease—it occupies a surface of about six inches by three in extent. It is situated on the axillary half of the right mamma, and extends into the right axilla. The skin feels rigid, as if the tissues were of the nature of parchment. It exhibits a peculiar corrugation, resembling that state of the integuments known as "cutis anserina," in an exaggerated condition. It is of a peculiar dull, yellowish tint, resembling that of ivory. The part is painful; often there is numbness, and at other times sharp, tingling, shooting pains. The right nipple is retracted—more than usual, for it has never been so well developed as the left.

A patch of the same disease, about one inch square, is developed in the skin of the left axilla.

In the summer of 1852, a third patch was developed, in the skin of the inside of the left arm.

At present—and I saw her in January, 1854—the diseased patches of skin have but little changed their appearances.

They have all increased a little, they all give her more or

less pain, and no treatment hitherto adopted has produced any beneficial result.

The patch on the right breast and axilla is longer; the nipple is deeply retracted, indeed invisible, and the gland atrophied. She is much more obese than when I first saw her, and her general health is very good.

The application which seemed to afford her the most relief was the liquor plumbi diacet. dil.



Second Communication.

ON THE

BLOOD AND EFFUSED FLUIDS

IN

GOUT, RHEUMATISM, AND BRIGHT'S DISEASE.

BY

ALFRED B. GARROD, M.D.,

PROFESSOR OF MATERIA MEDICA, THERAPEUTICS, AND CLINICAL MEDICINE,
AT UNIVERSITY COLLEGE;
AND PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

Received March 10th .- Read March 14th, 1854.

In February, 1848, I had the honour to communicate to the Society a paper on the condition of the Blood and Urine in Gout, Rheumatism, and Bright's Disease, which appeared in the volume of the 'Transactions' for that year; I now offer one intended as supplementary to the first, and introductory to a third paper, which I hope in a few weeks to bring before your notice.

The principal points established in the first paper having reference to the subject matter of the present communication are as follow:

- 1. The discovery of uric acid in the blood.
- 2. Its existence in very minute quantities, mere traces, in healthy human blood, and in that of some of the lower animals, as the duck.
- 3. Its augmentation in that fluid in certain pathological conditions of the habit.

The mode then recommended for its discovery and estimation was, to extract from carefully dried blood scrum, by

means of hot alcohol, such matters as are soluble in that menstruum; then taking up, by hot water, the urate of soda, and after evaporation, either crystallising that salt, or by the addition of a foreign acid, liberating the uric acid, and afterwards collecting and weighing. This process requires considerable time and care in the manipulation, especially if any attempt be made at determining the quantity; and hence, although it is a method most desirable to have recourse to, in investigating the pathology of disease, yet it is one which cannot readily be employed in clinical medicine.

To obviate this difficulty, I have devised another mode of ascertaining the presence of uric acid in the blood, which I have been in the constant habit of using clinically during the last four years, and with the results of which I have every reason to be well satisfied; it is a method which can be readily employed by every medical practitioner, and which has the advantage of requiring for its performance the abstraction of only a very small amount of blood. I have named the process the "Uric Acid Thread" experiment, which is thus performed.

"Take from one to two fluid drachms of the serum of blood, and put it into a flattened glass dish or capsule; those which I prefer are about three inches in diameter, and about one third of an inch deep, which can be readily procured at any glass house; to this is added the strong acetic acid of the London Pharmacopæia, in the proportion of about six minims to each fluid drachm of the serum; a few bubbles of gas are generally evolved at first; when the fluids are well mixed, a very fine thread is introduced, consisting of from one to three ultimate fibres, from a piece of unwashed huckaback or other linen fabric, about one inch in length, which should be depressed by means of a small rod, as a probe or point of a pencil. The glass is then put aside in a mode. rately warm place, until the serum is quite set and almost dry; the mantelpiece in a room of the ordinary temperature answers very well, the time varying from eighteen to forty-eight hours, depending on the warmth and dryness of the atmosphere.

"Should uric acid be present in the scrum in quantities above a certain small amount noticed below, it will crystallise, and during its crystallisation will be attracted to the thread, and assume a form not unlike that presented by stone sugar upon a string (see fig. 1). To observe this appearance, a linear magnifying power of about fifty or sixty, procured with an inch object-glass and low eye-piece, or a single lens of one sixth of an inch focus, answers perfectly. The uric acid is found in the form of rhombs, the size of the crystals varying with the rapidity with which the drying of the serum has been effected."

To ensure perfect success, several precautions are necessary.

1. The glasses should be broad and flat, as above described: watch-glasses of the ordinary kind are not good, being too small, thus allowing the fluid to be frequently spilt; and too much curved, causing the film of partially dried serum to curl up and split.

2. The acetic acid should be neither very strong nor weak. Glacial acid often forms a gelatinous compound with the albumen of the serum, and the appearance of flakes; and very weak acid adds unnecessarily to the bulk of the fluid. By experience I find the acidum aceticum (Pharmacopæia Londinensis) to be well suited for the experiment.

3. The character of the thread and its quantity is of some moment. Very smooth substances, as hairs or fine wire, but imperfectly attract the crystals: if the number or length of the fibres be too great, and the amount of uric acid small, the crystals become much scattered, and therefore but few appear in the field of the microscope. The glass should not be disturbed during the drying of the serum, or the crystals become detached from the thread.

4. Some attention to temperature is necessary; if the serum be evaporated at a high temperature, above 75° Fahr. for example, the drying may take place too rapidly to allow crystallisation; the temperature of an ordinary sitting room answers well for the purpose.

5. If the serum is allowed to dry too much before the examination takes place, the surface becomes covered with a

white efflorescence consisting of phosphates (see fig. 2), which may obscure the thread; this can be removed by the addition of a few drops of water before putting the glass under the microscope; sometimes over-drying causes the serous film to become cracked or fissured throughout, as well as covered with the phosphatic efflorescence.

6. It is well, when practicable, to put up two or more glasses with the same serum.

7. The blood should be recently drawn; that is, no change or decomposition should have been allowed to take place before the experiment is made; the reason for this precaution will be spoken of below.

Delicacy of the above Test for Uric Acid .- The serum of healthy blood, and that of blood from patients suffering from most diseases, gives no indication of the presence of uric acid by the "uric acid thread" experiment; and this absence of very extreme delicacy is of itself a most valuable quality, as only in blood containing an abnormal amount of this principle, will the acid be indicated. In my first communication, where the results of several quantitative determinations of the amount of uric acid in the blood in gout and albuminuria were given, it will be seen, that in 1000 grains of serum it varied usually from 0.045 to 0.175 grain; these numbers were necessarily smaller than the quantities which really existed, being those actually separated and weighed; guided by these results, I have endeavoured to ascertain the value of the "uric acid thread" experiment by the following series of observations. For this purpose I have taken serum of blood from the healthy subject, in which the most careful analysis could with difficulty show the presence even of a trace of uric acid, and to this serum have added the acid in the form of urate of soda in certain definite proportions. After testing such scrum in the manner above detailed, the following results were arrived at:

^{1.} Serum with the addition of uric acid in the gave no indication of proportion of 0·010 grain in 1000 grains

^{2.} Serum, containing 0.020 grain in 1000 grains { ,, no crystals of uric acid.

3.	Serum,	containing	0.0250	grain	in 1000	grains	{gave	2 or 3 crystals on thread.
4.	,,	,,	0.030	,,	1000	,,	,,,	a few crystals.
5.	21	,,	0.040	,,	1000	,,	,,	several crystals.
6.	>>	>>	0.050	**	1000	"	{ ,,	moderate sprink- ling of crystals on thread.
7.	>>	>>	0.060	,,	1000	"	{ "	thread pretty freely covered with crystals.
8.	>>	**	0.080	,,	1000	"	{ "	very numerous erystals on thread.
9.	>>	"	0.100	>\$	1000	,,	{ "	abundance of cry- stals, more than usually found in serum.
10.	77	> >	0·2 0 0	23	1000	22	, ,,	thread complete- ly covered with crystals of uric acid, and nume- rous scattered crystals.

It appears, therefore, that an amount of uric acid equal to 0.025 gr. in 1000 grains of serum, in addition to the trace existing in healthy serum, is required to be present in the blood before the "uric acid thread" experiment gives indications of its presence, and hence the appearance of the uric acid on the thread becomes complete evidence of an abnormal or morbid quantity in that fluid.

Changes which Uric Acid undergoes in the Blood when removed from the Body.

In enumerating the precautions which should be observed in making the "uric acid thread" experiment, it was stated that recently drawn blood should be employed, and the importance of this will be seen from the following observations, which at first perplexed me not a little. Having ascertained the presence of uric acid in the blood in many cases, and put aside the serum for a time, it was found that on repeating the experiments, no indication of the presence of that acid could be discovered; this circumstance more frequently happened in the summer months. On closer examination I found that the serum had usually undergone some slight decomposition, which gave me at once a clue to the explanation of the phenomenon, namely, that uric acid existing in blood is broken up, or undergoes a species of fermentation, when the albuminous portion of the serum becomes altered in character. In order to verify this, the following experiment was repeatedly made, and with uniform results. Uric acid in the form of urate of soda was dissolved in scrum in the proportion of from 0.10 gr. to 0.30 gr. to 1000 grains of serum, and the fluid allowed to become putrid. The whole of the acid was found to be destroyed, no indications being afforded by the "uric acid thread" experiment, although at first abundance of crystals were obtained.

I have made some few experiments in order to discover the change which the uric acid undergoes under the abovementioned circumstances.

When submitted to the action of certain oxidising agents, as the puce-coloured or per-oxide of lead, it is broken up into oxalic acid, urea, and allantoin; and when the oxide is in excess, the oxalic acid is further oxidised and converted into carbonic acid. This fact led me to try whether oxalic acid might not be formed in the blood-serum from a change in the uric acid, and for this purpose I made daily observations on such serum during its decomposition, and found evidence of the formation of oxalic acid in the occurrence of octohedral crystals of oxalate of lime; after a time these crystals appeared to become less numerous, and at last to vanish. I have also evaporated the serum when decomposition was taking place, and treated the residue in the manner described in my paper on 'The occurrence of Oxalic Acid in the Blood,' published in the 32d volume of the 'Medico-Chirurgical Transactions,' Many crystals of oxalate of lime were thus obtained for the most part octohedra, some agglomerated into oval bodies, some similar to dumb-bells. To make the experiment more conclusive. I have taken serum

of blood not containing an appreciable amount of uric acid, divided into two parts, and to one portion have added urate of soda in small amount, and allowed both quantities to decompose; it was found that in the portion of serum to which the urate had been added, oxalate of lime octohedra were formed, but not in that portion free from uric acid. microscopic examinations were made with object-glasses giving a linear magnifying power of from 200 to 400. Much further investigation is required on this subject; enough, however, has been done to show that the study of these changes is not without interest to the pathologist, for there can be little doubt that oxalic acid is formed in the animal body, not, as formerly supposed, from the oxidation of saccharine matters, but from the decomposition of uric acid. Very many observations on the occurrence of oxalic acid in the blood of man and the lower animals, since the publication of the paper above referred to, have convinced me that such is the case.

Non-occurrence of Uric Acid in the Perspiration of the Gouty Subject,

There are several instances on record in which a whitish powder has been noticed as occurring on the skin of gouty patients, especially after profuse perspirations, and this has not unfrequently been supposed to consist of some combination of uric acid, but no proof of the presence of this body in the exerction from the skin has, I believe, ever been given, In 1853, I adopted the following plan, in order to discover if uric acid is thrown out by the skin of gouty patients. A man was selected suffering from a severe attack of gout, who had been subjected to the disease for a long time, who had many tophi or concretions of urate of soda, and in whom the blood gave, at the time, abundant evidence of containing a large excess of uric acid. Several folds of white bibulous paper were steeped in a very weak solution of potash, and applied for about thirty hours to the abdomen, protected by oil-silk. The papers were rendered acid, and were found to

be strongly impregnated with the perspiration, and to contain much organic matter; these were treated with rectified spirit, and afterwards with hot water, and the watery solution, when evaporated, carefully examined for uric acid. No trace of this body could be discovered, by the murexide test, nor any crystals separated by the addition of acetic acid.

When we consider that the excretion from the skin is very acid in character, and very deficient in saline matters, it would hardly be thought probable that a substance having the properties of uric acid would be excreted with it, either in the free state or that of a saline combination.

Discovery of Uric Acid in certain Morbid Effusions.

I am unacquainted with any published analyses which have demonstrated the presence of uric acid in fluids effused into cavities in disease; but as far back as the year 1848, soon after my first communication to the society, I made some investigations upon this subject, and found indisputable proof of its occurrence. The first of these were made on the abdominal and pericardial fluids in a case of granular kidney, with cirrhosis of the liver, and extensive cardiac disease; for some days prior to death, suppression of urine had supervened.

Abdominal Fluid.—Golden yellow colour, rather thick and turbid; slightly acid in reaction at first, but becoming alkaline on partial evaporation. Odour during evaporation similar to the perspiration. Sp. gravity, 1013:54.

In 1000 parts were contained	Solids Water		36·40 963·60
			1000:00

In the 36:40 parts of solids, there were 10:79 parts of albumen, and, on incineration, 5:94 parts of ash were left, the salts consisting of phosphates, chlorides, and sulphates; evidence of uric acid was obtained, in its separation in the

crystalline form, and also of urea; the weights of these bodies, however, were not determined.

Pericardial Fluid.—This was lighter in colour than the above, in other respects similar. Reaction acid. Sp. gravity, 1010.60.

1000 grains	$\operatorname{gave} \Big\{ \begin{array}{l} \operatorname{Solids} \\ \operatorname{Water} \end{array}$		24·53 975·47
			1000:00

The solids yielded, of-

Albumen .					10.53
Salts (ash)					9.70
Uric Acid					0.069
Urea .		weigh	t not	dete	ermined.

Since the time the above analyses were made, I have ascertained the existence of uric acid in effused fluids in several cases where the blood gave evidence of containing an abnormal amount of that principle. I have many times crystallised it from such fluids by the "uric acid thread" experiment.

Discovery of Uric Acid in the fluid artificially effused by the application of Blistering Agents, or in Blister-Serum.

Not unfrequently in practice, for the sake of diagnosis, it is desirable to ascertain the condition of the blood, as to the presence or absence of uric acid, in cases where, from the state of the patient or other causes, the abstraction of that fluid cannot well be effected, and it occurred to me that, probably, the fluid effused by the application of a blister would contain this acid, if the circulating fluid were impregnated with it; experience has proved the truth of this conjecture. The following are some of the results I have obtained by the use of the "uric acid thread" experiment, which may be employed for the discovery of uric acid in blister-serum as well as in blood-serum:

1853. Feb. 9. E. W.	Scrum of blood. Sp. gr. 1029 2, at 46° Fahr. Abundance of uric acid on thread.	Feb. 11. Serum of blister. E. W. Serum of blister. Abundance of uric acid.
March 5. J. W.	Serum of blood. Sp. gr. 1026 4, at 51° Fahr. Abundance of wric acid.	March 6. J. W. Scrum of blister. Abundance of uric acid.
March 25. — R.	Serum of blood. Sp. gr. 1028, at 41° Fahr. Abundance of uric acid.	March 28. — R. Attack passing off. Serum of blister. Sp. gr. 1022 8, at 46° Fahr. Crystals of uric acid.
March 29. J. H.	Serum of blood. Sp. gr. 1029.6, at 47° Fabr. Abundance of uric acid.	April 1. J. H. Scrum of blister. Sp. gr. 10248, at 54° Fahr. Abundance of uric acid.
June 30. C. S.	$\Big\{$ No blood taken.	June 30. C. S. Scrum of blister. Numerous crystals of uric acid.
Nov. S. M. J.	Serum of blood. Sp. gr. 1026.8, at 62° Fahr. Crystals of uric acid not very numerous.	Nov. 11. M. J. Scrum of blister. Sp. gr. 1024-0, at 65° Fahr. Crystals of uric acid several in number.
1854. January 2. C. F.	Scrum of blood. Sp. gr. 1026·8, at 50° Fabr. Abundance of uric acid.	Jan. 13. C. F. Serum of blister. Moderate amount of uvic acid.

It appears, then, from these results, that the fluid effused by the action of a blistering agent applied to the skin, will give evidence of the presence of uric acid when the blood from the same patient exhibits the phenomena, and in the performance of the experiment the same precautions must be taken as have been before indicated when the process with blood-scrum was detailed; but, in addition to these, one more circumstance must be attended to, namely, that the application of the blister should not be made to an inflamed part, for it seems that the existence of inflammation¹ has the power of preventing the appearance of

¹ The inflammation attending the production of a blister does not appear to destroy the uric acid.

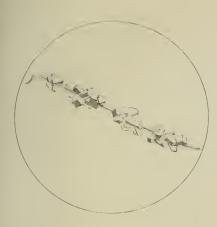
uric acid in the effused scrum, as shown by the subjoined results:

Should further inquiry confirm the result which the above limited number of observations appear to point to, namely, that during the existence of inflammation in a part, there is a destruction of the uric acid (when such exists) in the blood of that locality, and other independent researches which I have made appear to favour much this idea, it may hereafter throw no small amount of light on the pathology of certain morbid conditions of the system; in the present paper, however, I have abstained, as much as possible, from connecting the condition of the blood with any specific disease, reserving that subject for my next communication on "Gout and Rheumatism," when their differential diagnosis, and the nature of the so-called "rheumatic gout," will be discussed.

With regard to artificially effused fluids, I may observe that, during crystallisation, the uric acid usually assumes a form slightly different from that in which it occurs in blood-serum, the crystals having a greater tendency to become agglutinated, and form irregular masses, as seen in fig. 3. Lastly, these effused fluids may be employed, not only to ascertain the existence of uric acid, but likewise of other principles, as urea and sugar, which are contained and can be detected in them, when, in the blood of the patient, their presence is capable of demonstration.



Fig 1





Une Acid crystallized on fibre from Blood Serum very slowly aned)

Unc Acid crystallized to fibre from Bu il se







And women is the property of the



EXCISION OF THE KNEE-JOINT.

RY

G. M. JONES, Esq., M.R.C.S.E.,

SURGEON TO THE JERSEY HOSPITAL.

Received April 10th .- Read April 11th, 1854.

WHETHER excision of the knee-joint be a justifiable operation or the reverse, is a point which has been discussed both at medical and surgical societies, and among prac-There can be no doubt that there titioners at large. exists an extensive prejudice against it, it being condemned by a large majority of British surgeons; but few of the later writers on practical surgery speak of it in a manner to encourage its performance; others are altogether silent on the subject; while in France, if thought of at all, it is so only in connexion with the memory of the Moreaus. This cannot fail to appear extraordinary to those who have given the history of this operation the least attention, for though it must be admitted that in several instances it has terminated fatally, still, as the following facts will prove, few attempts at curative surgery ever promised better at their commencement than this did.

The first well authenticated case in this country (for though Mr. Filkin's, which occurred in 1762, is said to have succeeded, it wants data to substantiate it) was performed in 1781, the cure in this instance being perfect; "the patient was afterwards able to perform all the duties of a seaman." The operation was performed in France in 1792, and certainly with success, for although the patient died three months after of "epidemic dysentery, which, as is well known, carried off the greater portion of those whom it attacked,"

the operator, whose word is above suspicion, states, "I looked upon my patient as cured, for I had no relapse to dread."

Again, in 1823, it was twice performed in Dublin. It is true that in the first case bony union did not take place, but then "disease had proceeded too far; in a word, the case was one to which the operation of excision was not applicable." The patient, however, lived more than three years, in all probability quite as long as she would have done had amputation been resorted to. The second case proved more fortunate; for three years after, the report says, "the patient is able without assistance to stand or walk the length of the day."

In Edinburgh, excision of the knee-joint was performed in 1829, the little patient recovered, so that Mr. Syme, referring afterwards to this case, expresses himself as "having no doubt that ultimately the excised limb will be nearly as useful to him as the other." Mr. Syme repeated the operation the following year, but unsuccessfully, the child dying within the fortuight.

I have brought forward these cases not only as being the first in England, France, Ireland, and Scotland, but also to show that an operation which its present advocates are sometimes blamed for performing, was not considered an unsurgical procedure in the hands of such distinguished men as Park, Crampton, Moreau, and Syme, each of whom doubly sanctioned it by its second performance. The result of these cases certainly bears out my previous assertion, that few if any attempts at curative surgery have ever promised better at their commencement; and I may also add that few have ever so soon been allowed to fall into disuse, as from the time of Mr. Filkin's operation until 1850, a period of eighty-cight years, but twelve cases are on record.

In the year above named (1850) this operation was renewed by Mr. Fergusson, of King's College Hospital, and no better proof can be offered of the estimation in which the views of this surgeon are held, together with the determination of many practitioners of the present day to advance conservative surgery to the utmost, than the fact, that in the

space of little more than three years no less than twenty-one operations of excision of the knee-joint arc recorded. The subjoined table will show the result of all the cases I have been able to collect, several of which have not yet been published.

Excision of the Knee-Joint, from 1762 to 1854.

Date.	Surgeon.	Name of Patient, &c.	Result.
Aug. 23, 1762	Mr. Filkin	A man, name unknown	Case not well authenticated. It is stated, however (on the authority of Mr. F.'s son), that on Nov. 21 of the same year, "he was got so well, as to require no further attention."
July 2, 1781	Mr. Park	Hector M'Caghen, æt. 33, a sailor	Cured. "Afterwards performed the duties of an able seaman."
June 22, 1789	Mr. Park	Chas. Harrison, æt. 30, a wheelwright	Died, 115 days after the operation, of exhaustion.
Sept. 17, 1792	M. Moreau	M. Claude, æt. 20	Cured. For although the patient died 3½ months after the operation, the surgeon says, "I looked upon my patient as cured, for I had no relapse to dread." The bones had become consolidated.
	M. Moreau	A man, no name given	Died shortly after the operation.
Oct. 21, 1809	M. Moreau Mr. Mülder	A man, no name given A pregnant woman	
, 1816	Professor Roux	A man, æt. 32	Died of phlebitis on the 18th day.
May 7, 1833		Susan Connally, æt. 25 Ann Lynch, æt. 22	Discharged from hospital on 27th June, 1824, "in very good health," but no bony union had taken place between the femurand tibia. Died of phthisis, three years and two months after the operation.
Aug. 4, 1823	on 1. Crampton	Ann Lynen, act. 22	Circus

Date.	Surgeon.	Name of Patient, &c.	Result.
Dec. 7, 1829	Mr. Syme	John Arnot, æt. 8	Cured.
Dec. 28, 1830	Mr. Syme	Ann Mackintosh	Died, eleven days after
	·		operation.
July 20, 1850	Mr. Fergusson	A man, æt. 21	Died on the ninth day
			of acute necrosis of
x 30 4054	M T	C 1 77	the femur.
Jan. 19, 1851	Mr. Jones	Sarah Hansford, æt. 25	
April 27, ,,	Mr. Jones Mr. Jones	John Le Gros, æt. 10	Died of epidemic dy-
Sept. 4, ,,	Mr. Jones	Miss Le Maistre, æt. 50	sentery, fourteen days
			after the operation.
Jan. 25, 1852	Mr. Jones	Robert Quarm, æt. 7	Cured.
May 5, ,,	Mr. Mackenzie	John Johnston, æt. 28	Cured.
June 7, "	Mr. Page	Wm. Graham, æt. 16	Cured.
Sept. 19 "	Mr. Jones	Ab. Le Feuvre, æt. 19	Cured.
Oct. 30, ,,	Mr. Fergusson	Ann Goring, æt. 20	Cured.
February 5,1853	Mr. Mackenzie	Wm. Harrisson, æt. 42	Cured.
March 16, ,,	Mr. Pritchard	E. H., a man, æt. 20	Cured.
,, 28, ,,	Mr. E. Thomas	John Harrett, æt. 12	Cured.
April 2, ,.	Mr. Fergusson	Emma Saville, æt. 28	Died of phlebitis, on the sixteenth day.
	Dr.Steward.Bel-	No name or sex given	Unable to obtain fur-
177	fast		ther information than
			"that the case was
			encouraging."
April 17, ,,	Mr. Jones	Wm. Livermore, æt. 12	Cured.
Oct. 31, ,,	Mr. Gore, Bath		Recovered.
· ,,	Dr. Keith, Aber-		0
	deen	A boy, æt. 9	Recovered.
,,	Mr. Butcher,		
-	Dublin	A 5'12 C12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Progressing favorably.
Dec. 24, "	Mr. Mackenzie	Miles Christie, æt. 17	Died of exhaustion, the
Ton 9 1954	Mr E Thomas	John Christia at 16	twenty-second day.
	Mr. Erichsen	John Christie, æt. 16 Wm. Shaw, æt. 7	Under treatment.
Feb. 15, ,,	Mr. Eriensen	win. Snaw, æt. /	Onder treatment

The above table shows that six of the cases are my own, and their being no longer under treatment, renders them, I apprehend, fit subjects whereby to test the value of the operation. Before proceeding further, however, I must anticipate the very reasonable remark, that my inferences are drawn more particularly from my own practice; the only excuse to be offered is, that previous to visiting the metropolis in November last, I had never witnessed the operation of excision, nor even seen a patient who had submitted to it; and, having been for nearly thirty years deprived of the opportunity of being present when such interesting cases appear, as draw forth the surgical talent of men from whose

practice and remarks so much valuable information is derived, I am forced in advocating excision of the knee-joint to fall back on those cases which have come under my own care, and thus to appear egotistical against my wish; at the same time I must confess my impression, that remarks from one who has been completely thrown on his own resources, are of more value in forwarding the cause on which so much interest has of late been excited, than those of men who are without practical experience.

The question may naturally be asked, why this operation has been more successful in my hands than in those of others? The reasons are obvious; consisting in the great advantages arising from the locality and consequent salubrity of the Jersey Hospital. It is not surrounded by high and crowded buildings and a dense population, but has a large piece of ground in front, and a garden at the back, both of which are open to the patients for exercise; and its left wing is scarcely two hundred yards from the sea. The wards are airy, and but rarely crowded; and I have hitherto made it an invariable rule to have a separate, well-ventilated room, as well as a special nurse or nurses, for each of the patients on whom excision or any other important operation is performed. These incalculable advantages are unattainable in metropolitan hospitals, and to them alone, with the stimulating treatment commenced immediately after the operation, and steadily persevered in for a considerable time, is my success to be attributed.

The objections raised against the operation are twofold. Its severity, the shock to the system, danger from hæmorrhage, erysipelas, burrowing sinuses, wasting suppuration, &c., forming the first class; and from these it is argued that amputation is much less hazardous. Then, supposing the patient to have overcome or escaped these dangers, we are told that want of union in many cases renders the limb useless; and if the subject be a child, the absence of growth in the excised member is brought forward to prove that a wooden leg, in all instances, is of much greater utility than

XXXVII.

the one on which excision has been practised. These once formidable objections can now be combated by existing proofs of their want of weight—the operation having been frequently performed without endangering life further than would have been the ease in amputation; and we can from experience affirm that no mechanical contrivance yet known can approach in utility to the limb which has been subjected to this much condemned operation. My own experience enables me fearlessly to assert, that in five of my cases no greater constitutional derangement followed than I have witnessed after the most favorable cases of amputation; in none has the hæmorrhage been sufficient to require either ligature or torsion; nor has the slight appearance of erysipelas, in one or two cases, justified even a moment's uncasiness. It must be admitted that suppuration is greater after excision than it is even in stumps which heal by granulation, in consequence of its longer continuance; but it is, as far as I have been able to judge, less weakening to the system, being much more gradual, and consequently not so exhaust-The first class of objections thus do not appear to be borne out by those cases which have fallen under my observation, and I cannot help believing that the two which were seen last November, by many of the most eminent surgeons in London, must prove satisfactorily that excision in those cases claims a marked superiority over amputation. As regards the remaining objections, I strongly suspect that the case brought forward by Mr. Syme in support of his opinion, will prove the exception rather than the rule.

Three of my patients were children, under ten when operated on, and in neither of these has growth been stunted, as is apparent from the fact, that the boxes in which the excised limbs were confined immediately after the operation, are now much too short to contain them. The following foreible statement, forming part of the history of Mr. Page's case, with which that gentleman kindly favoured me some time back, goes very far to prove the correctness of my views on each point of the subject.

"I saw the patient this day (January 25th, 1854); he is quite well, the limb is firmly anchylosed and perfectly straight. He has now for some time been employed at the steam looms of a cotton factory, where he works as long as the other hands—and he has to walk or stand the greater part of the day. He walks well without inconvenience or fatigue; in proof of which, he informed me that on Sundays he not unfrequently takes a walk of seven or eight miles. I may mention the important fact, that the boy has grown several inches since the operation, and that both legs happen to have grown equally in length, there being now, as at first, about three inches of difference between them."

The same plan of operation has been followed in all my cases, with the exception of the last: a lateral incision along each side of the joint, and a transverse one immediately over the centre of the patella; the flaps then dissected upwards and downwards, and the patella removed, the joint ends exposed, and so much of the femur and tibia excised as was found in a disorganised state; the bones being then placed in juxtaposition, and secured in a suitable box, similar in some respects to Sir Astley Cooper's fracture-box. This method, as far as I have been able to learn, is the one usually pursued. It had, however, some time before occurred to me that this plan might be improved upon, and having found such to be the case, I can now recommend the latter plan as one possessing the greatest advantages.

It is somewhat remarkable that similar views should, at the same time have been entertained by my friend, Mr. R. J. Mackenzie, Surgeon to the Royal Infirmary, Edinburgh, though I had not then the pleasure of his acquaintance, even as a correspondent. He arrived in Jersey a few days after my last operation had been performed, and on stating to him the method adopted, I found that he had for some time been impressed with its practicability, and probable advantages, and had, moreover, decided to follow it out substantially on the first opportunity, which he did shortly after his return, there being this difference between our

practice—Mr. Mackenzie preserved the patella, but divided its ligament. The subjoined case will show in what respects our operations differ, and also the superiority of this new method over the old one, and will, I trust, induce the greatest contemners of this operation to admit, that at all events in one case, excision of the knee-joint has obtained a triumph in its results which amputation could not possibly have achieved.

My patient, a boy, æt. 12, had for some time suffered under strumous affection of the right knee-joint, which had in no way yielded to the treatment ordinarily pursued in such cases, consequently the operation of excision was performed on the 17th of April last, and in the following manner: -A longitudinal incision, full four inches in extent, was made each side of the knee-joint, midway between the vasti and flexors of the leg; these two cuts were down to the bones, they were connected by a transverse one just over the prominence of the tubercle of the tibia, care being taken to avoid cutting by this incision the ligamentum patella; the flap thus defined was reflected upwards, the patella and its ligamentum were then freed, and drawn over the internal condyle, and kept there by means of a broad, flat, and turnedup spatula; the joint was thus exposed, and after the synovial capsule had been cut through as far as it could be seen. the leg was forcibly flexed, the crucial ligaments almost breaking in the act, only required a slight touch of the knife to divide them completely; the articular surfaces of the bones were now completely brought to view, and the diseased portions removed by means of suitable saws, the soft parts being kept aside by assistants. In this case the external condyle of the femur was found hollowed out by a large abscess, so that it was necessary to saw off (obliquely) another portion of the earious bone, and to gouge out the remainder, until healthy cancellous tissue was reached, the articular surface of the patella had also to be gonged until sound bone was attained; the bones were now brought in apposition, and the patella and its ligament replaced as

nearly as possible in their natural position, the remaining parts of the operation, together with the after-treatment, were conducted in the same manner as in my other cases.

I shall not enter into details respecting the progress of the case, it is sufficient to say that before the expiration of seven weeks, the little patient was able to turn the limb from side to side easily and quickly, and to raise the leg from the hip upwards without assistance or appliance of any kind; the patella then adhered firmly to the femur and tibia, and its ligament preserved its integrity: unfortunately, however, for some weeks before this gratifying termination occurred, symptoms, which had never before manifested themselves even in the slightest degree, supervened, excruciating pain was felt in the opposite hip, which most energetic measures for a time were unable to mitigate; after many weeks' suffering, the pain by degrees lessened, while the limb became gradually shorter. A spontaneous luxation had taken place, so that at present my little patient when walking, which he does with the assistance of only one stick, presents the following anomalous appearance: on the right foot he wears a thin shoe, and on the left a boot, the heel of which is unwards of two inches thick; the existing lameness is only perceptible on the left side, and is not apparent on the right, and the leg which, under ordinary circumstances, ought to have had at first almost all, and throughout life the proportionably greater part of, the onus, would now be almost the useless member described by the opponents to this operation, without the powerful and almost entire support of the one on which excision has been performed.

May not the question now be asked, if in this case amputation had been resorted to, could any patient with a wooden leg on the right side, and a dislocated and diseased hip on the left, be able to walk with no other assistance than one small stick? The answer is too obvious to be dwelt on for a moment.

It is only by comparing cases that we arrive at a right conclusion respecting the superiority of one mode of operating over another; the preservation of the patella and of its ligament is, I feel satisfied, a plan which ought to supersede the other, and be followed out in those cases in which it is practicable; the operation thus performed is rendered more tedious and difficult, but these are secondary considerations when it results in obtaining a more favorable issue.

The rectus acts as a splint, and not only assists materially in keeping the bone in apposition, but also counteracts the natural tendency of the limb to become bent; and I cannot help believing that, should union of the femur and tibia not take place, the preservation of the patella and its ligament must render the limb more useful than it would otherwise be. The following quotation from a paper written nearly fifty years ago, by Dr. James Jeffrey, of Glasgow, is so conclusive on the point that I cannot resist giving it. In speaking of Mr. Parke's and Morcau's operation, this gentleman says—

"It may be said that, though it be an object of importance to preserve the attachment of the extensor muscles in elbow cases, where the joints remain moveable, the surgeon may consult his own convenience at the knee, because that joint, after the operation, is stiff. But it should be considered that, though the crureus and the vasti be extensors of the legs, their auxiliary, the rectus femoris is a flexor of the hip-joint also, and of course a bringer forward of the thigh'; and to lose the use of that muscle, in walking, &c., must always be a serious inconvenience, whether the knee-joint be stiff or not; because it acquires power by contraction, the length of the lever with which it acts increasing as the muscle becomes shorter: whereas, most of the other flexors of that joint lose power, their lever decreasing in proportion to the decurtation they suffer in acting. Except, therefore, it be supposed that the ends of the common tendon of the extensor muscles, when cut above the patella, or the ends of the ligament that connects the patella to the tibia, unite after the operation, it is obvious that, by the transverse incision, the power of bringing forward the limb must be impaired."

But, while earnestly recommending the operation of excision as a valuable substitute for amputation, I would not be understood to say, that it can be had recourse to in all cases. In those which are commonly called white swelling of the knee, among others, it may occasionally be quite inadmissible, but in this, as in all other respects, I feel persuaded that the adhering to one mode of treatment, whatever be the circumstances, must produce frequent disappointment; the general features of the case must decide the course to be adopted by the surgeon in this operation, as well as in any other that may come under his notice. As in cases which ultimately necessitate amputation, we are bound in the first place, to exhaust all those means which, if resorted to in an early stage, and judiciously persevered in, may not unfrequently effect a cure; still one important fact must not be lost sight of-the greater the debility of the system before excision, the smaller are our chances of success, while the larger amount of integrity in the soft parts will certainly facilitate the eure. There are some few cases which, though for a time regarded as hopeless, yet under constitutional and local treatment, come to a happy termination; still these cases, while they point out the necessity of due reflection before attempting an operation which may endanger life, must not be too much relied on, and when it is found that constitutional disturbance keeps pace with local symptoms, it appears to me to be consistent with sound surgical principles, that the means of avoiding amputation be no longer delayed; and as in all cases in which excision is decided on, we are, at the same time, prepared to amputate should our diagnosis have proved incorrect, ought we also to be prepared to abandon it altogether, if the admirable plan advocated, and in some instances so successfully followed, by Mr. Gay, that of making free incisions along the joint, offers us the hope that by these means a cure may be

effected? I would, therefore, recommend, as a general rule, free incisions, which can be so made as to constitute the first step in the operation of excision, and to allow a sufficient examination of the joint by means of the finger and probe. Should it thus be discovered that the whole joint is in an advanced state of earies, excision may at once be performed, provided the shaft of the femur be not implicated in the disease pervading the joint. The deductions to be drawn from the observations I have been able to make on this subject are: 1st. That excision of the knee-joint is not attended with more danger to life than is amputation, 2d. That while the patient, in the plurality of cases, is much longer under treatment after excision than after amputation, it must not be forgotten, that though a stump may heal much quicker, yet months must often clapse before the parts have attained sufficient firmness to admit of the use of a wooden leg. 3d. That no mechanical contrivance yet known can supersede, or prove as useful as, the limb on which excision has been successfully performed. 4th. That preserving the patella and its ligament, not only ensures greater success, but also gives rise to the question, whether, in those favorable cases where ligaments are not much disorganised, it may not be an object to encourage a false joint rather than not. Lastly, that amputation can at any time be performed after the first dangers from excision are passed, as easily and with quite as much hope of success, as after the failure of the remedies ordinarily employed.

Daily recurring facts lead one to believe that the prejudice entertained against excision of the knee-joint is passing away; even while writing this, I have received communications from different parts of the country, proving it to be one of those operations which, however slow its progress has hitherto been, is now evidently advancing. The surgeons of the present day are not satisfied with bare statements, or led away by preconceived opinions, they judge for themselves; and I would humbly hope that my cases may be of some small use in promoting the interests of an operation

which, I consider, not only at present most valuable, but as capable of still further improvements.

I cannot better conclude these imperfect observations than by applying to this particular operation the words used by Moreau when speaking of excisions in general. "It is my wish to show, by the evidence of facts, that the excision of carious joints is, in many cases, a very practicable operation, and one that holds out advantages so unequivocal, that amputation ought to be proscribed in every case where excision may be performed."



ON THE RADICAL CURE

OF

REDUCIBLE INGUINAL HERNIA,

ВЪ

A NEW OPERATION,

WITH CASES AND REMARKS.

BY

T. SPENCER WELLS, F.R.C.S.

Received April 10th .- Read May 9th, 1854.

In the year 1847 I assisted Dr. Burmester at Malta to perform an operation for the cure of reducible inguinal hernia. The operation adopted has not been made known in this country so far as I am aware. It was devised by Professor Wützer, of Bonn, and I shall presently describe it.

Dr. Burmester's patient was a gentleman 28 years of age, who had suffered for about eight months from oblique inguinal hernia on the right side. The external ring was dilated, but the intestine had not descended into the scrotum. The inguinal canal readily admitted an ordinary-sized finger. The patient was strong and healthy. He objected very much to wear a truss. No dangerous symptom followed the operation. The patient remained in bed eight days, and was confined to his room a fortnight longer. He afterwards wore a truss for four months. It was then left off, and he had not had any recurrence of the protrusion a few months ago when I heard from him, upwards of six years after the operation.

I have since performed this operation twice myself in two very similar cases; one in the year 1848, and the other in 1850. One patient was a naval officer, the other a groom, their ages being 18 and 20, and the hernia of recent formation, both oblique inguinal on the right side. Complete success followed, and although both patients are accustomed to very active exercise, no return whatever of the hernia has taken place.

I have not met with other cases suitable for operation in my own practice; but when at Bonn in the year 1850, Professor Wützer showed me two of his patients upon whom he had performed the operation, one only eight days before I saw him, the other about two years before. No unpleasant symptom had followed in the first case, which was going on well, and in the second a radical cure had been effected. reply to a question I lately addressed to the professor as to the numerical results of his operations he says: "I am not able at present to give you the statistical results of all the eases upon which I have operated, as I have not time to collate them. I can now only say that, since the autumn of 1838, I have repeatedly practised my operation in the Klinik every session before many witnesses, and that I have never seen severe peritonitis follow it, still less any fatal result. All those operated on have not been eured. In several relapse followed, but this was traceable either to the patient's leaving off the truss too soon, or undertaking very hard bodily labour soon after the operation." When at Vienna last year, Professor Sigmund informed me that he had performed the same operation nineteen times in the great hospital of that city, a successful result following in fifteen cases. In two cases gangrene of the integuments followed, and in two others relapse occurred after some weeks, but no death had happened. Professor Rothmund, of Munich, has published the result of his operations on the same plan in the hospital of that capital. He had operated thirty-five times in thirty-two cases, in two years and a half, and no death had followed. His results are almost uniformly successful; but I am informed by a gentleman who wrote to me lately from Munich, that these statements are not deserving of very great weight, as the patients were not watched long after the operation to test the occurrence of relapse. But I trust that a

few remarks upon a method of operating which has led to the results I have just recorded may not prove unacceptable to the Society.

When a surgeon operates skilfully upon a strangulated hernia at the proper moment, he achieves one of the greatest triumphs of our art, for he unquestionably saves the life of the patient without removing or deforming any part of his body. A surgeon who should invent a method of radically curing hernia certainly and safely, would be a great public benefactor, not only by relieving thousands from the inconvenience of wearing a truss, but by averting the danger of strangulation to which they are continually exposed to, in a greater or less degree, through every period of life. It may be said, that the security afforded by a well-fitted truss is almost perfect, and the inconvenience it produces not very great, but patients differ very much in their estimate of the evils of wearing a truss for life; and the frequency with which strangulation occurs among persons who do wear trusses, proves that a more effectual safeguard is required.

Every one must admit that the balance of opinion in the present day among the most experienced surgeons of Great Britain, France, and Germany, is decidedly against any operation for the radical cure of hernia. It must also be admitted, that the opinion has been formed upon facts which fully justify it, for the various modes of operating condemned have been often followed either by death, dangerous peritonitis, gangrene of the soft parts, or by recurrence of the protrusion, so that the patient, after exposure to danger, has been left in no better condition than before. So far as any proceeding implies either opening of the hernial sac, its destruction by the cautery or caustics of any kind, its scarification, the introduction of foreign bodies into it, or the application of a ligature around its neck, every man of sound judgment must agree with the general opinion. For, even if the danger of peritonitis or gangrene were escaped, one would naturally expect that adhesions of the neck of the sac would soon extend, become loose, and give way before the pressure of the viscera, and a new hernial protrusion occur.

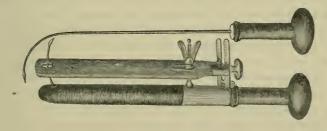
But the question becomes quite a different one when a mild operation of invagination, skilfully practised in properly selected cases, has to be considered. It is true, that Gerdy's method of invagination, although occasionally successful, has led so often to death, or to gangrene of the scrotum and exposure of the testicle, and in the more successful cases has been so often followed by relapse, that it has fallen deservedly into discredit, and is now very seldom performed. But if an array of facts, such as those I have collected at the commencement of this paper, prove that invagination can be so performed as to be safe and generally effectual, perhaps the opinion now entertained may be modified.

The radical cure of reducible hernia can be effected in two ways: 1, by inducing union of the two opposed serous surfaces of the hernial sac by adhesive inflammation and exudation; and 2, by producing close union with an organic body pushed from without into the canal.

I think it better to pass over the various plans which have been adopted with the hope of curing hernia by the first of these plans; for, with the exception of compression, they have all been exploded. A well-fitted truss, properly and permanently applied, gradually excites exudation and adhesion, and in young persons hernia of very considerable size is frequently cured radically without further treatment. But, in adults, compression is only palliative; for the cases in which it effects a radical cure are so rare, that such a happy result is scarcely to be expected in any given case.

The attempts of Belmas, Gerdy, Leroy-d'Etiolles, Signoroni, and Jobert, to close the hernial canal by means of organic union with it of a part of the body of the patient himself, though sometimes successful, have on the whole proved that it is desirable to adopt some plan by which the same end might be attained more safely and securely. It being understood that the inguinal canal must be closed by a portion of skin pushed into it, the first precaution necessary is to effect the closure in such a manner that the adhesive inflammation which it is desired to excite in the hernial sac should not extend to the peritoneal cavity.

Now it has been supposed by Gerdy and others that, when a hernial tumour is pushed before the skin of the scrotum by the finger of the surgeon, the sac is pushed upwards; and that the needle, passed after the method of Gerdy, does not implicate the sac. This, however, is not the case. It is contrary to the anatomical condition of the parts. The serous hernial sac is so firmly adherent to the inner surface of the inguinal canal, that it cannot be separated without the assistance of the knife. In one case recorded by Wützer, where a hernia had only existed three days, the adhesion of the sac to surrounding parts by inflammation and exudation was so firm, that separation could only be effected by the If the sac were really moveable, the attempts of Gerdy and every other surgeon to cure reducible hernia radically would necessarily be uncertain, for all we have to trust to is closure of the abnormally dilated canal by adhesive inflammation. We must consider all this fairly in judging of any operation. Professor Wützer did so before he devised the instrument which is now brought before the Society.



He thought that the most safe and promising plan of closing the canal would be by effecting upon its whole inner surface up to the internal ring (and when possible closing the ring itself) an equal mechanical pressure which could at any time be increased or diminished as might be desired or requisite. While keeping a compressing instrument firmly fixed during several days, all use of the knife, and of every caustic under whatever name, should be excluded, and the entrance of air into the peritoneal eavity carefully prevented.

It may be seen that the instrument consists first of a evlinder of very hard wood. This is 3\frac{3}{4} inches long, and is made of different diameters, according to the breadth of the canal. It is destined to take the place of the index finger, after the latter has pushed a part of the scrotum through the abdominal ring into the inguinal canal. Towards its anterior blunt extremity it becomes gradually thinner. It contains a canal, lined with metal, which conducts an elastic steel needle, flattened on the point and furnished with a moveable handle. A round opening near the point of the cylinder allows the needle to pass through, so that, when the cylinder has been properly introduced, pressure upon the handle of the needle sends its point along the interior of the evlinder, the skin of the scrotum, the serous coat and coverings of the hernial sac, projecting at last through the integuments. In order to increase the pressure which the wooden body remaining in the canal itself exercises, a moveable case of hard wood is made concave, corresponding to the outer convex side of the cylinder. It is made rather wider than the cylinder, projecting two or three lines on either side, in order to distribute the pressure more equally, and near the end is an opening to receive the projecting point of the needle, which thus fixes one end of the cover over the cylinder. The other end is supported upon a moveable metallic staff; near this is a screw, by means of which cover and cylinder can be pressed together to any degree of strength, so that in a moment the anterior wall of the hernial sae, of the inguinal canal, and the tissues between the cylinder and the cover can be compressed to the precise degree each ease may require.

The cylinders are made of various calibres, to adapt them to the different diameters of the inguinal canal, as a great deal depends on the proper filling of the canal by the cylinder, the pressure of which should operate as equally as possible upon all parts of the inner surface of the sac. On the other hand, the diameter of the cylinder must not be too great, or it would be impossible to pass this blunt end to the internal ring, and our object would be defeated; a

diameter of five to seven lines suits such cases. The invaginated scrotum fills the rest of the canal.

The instrument is used in the following manner: - After the hair has been shaved off, the bladder and rectum emptied, the patient lies on his back, with the thighs flexed and raised, and the operator stands or sits between them. The intestine is replaced, if down. The surgeon then places the point of his left forefinger upon the scrotum, about an inch below the abdominal ring, on the affected side, and by carrying the finger, with its palmar surface directed upwards and outwards, through the ring into the canal, he pushes the yielding skin of the scrotum into the canal as deep as practicable; at all events, so far that the apex of the cone of skin thus formed reaches the internal ring. The cylinder having been oiled, it is now introduced by the right hand, withdrawing the finger as the instrument enters. This is not always done without difficulty, and requires some practice: the invaginated skin may return as the finger is withdrawn, and require replacement; or, in cases where the ring is moderately narrow, the cylinder may not be easily introduced by the side of the finger. In this case the finger must be partially withdrawn, to make room for the advance of the end of the instrument. Again, in old hernize the cellular tissue about the ring is so lax, that the cylinder may be pushed up beneath the skin outside the canal; when this happens, the cylinder is found, on examination, to be much more moveable than when it is within the canal. When convinced that the cylinder properly fills the inguinal canal, the needle is passed through the cylinder, the canal, and the integuments; the wooden cover-plate is placed over it, and pressed against the skin by the screw; the handle of the needle is then unscrewed, and the projecting point is covered by a small piece of cork.

The patient is kept quiet on his back, with the knees bent and supported by pillows. The diet must be so regulated that, on the one hand, we may not prevent a sufficient degree of inflammation in the canal; and, on the other, we may guard against the further extension of it to the perito-

XXXVII. 6

næum. Should symptoms of peritonitis occur, they must be immediately met with energy; but this is very seldom the ease if the patient remain quiet. Very gentle pressure should be employed at first; but the screw may be tightened daily, although, in doing this, it is advisable to raise the plate, in order to judge of the degree of existing inflammation, and regulate the after proceedings by it. If this is found to be more than requisite, the pressure is diminished, or the instrument entirely removed.

About the fourth or fifth day the punctured wound begins to suppurate, and there is more or less redness and swelling around it. Professor Wützer says it is not necessary, on the average, to leave it applied more than six days; I have left it seven and eight days. It should be withdrawn as soon as serous fluid, containing fat and epidermis, begins to ooze from the plug; if left longer, injurious suppurative inflammation comes on, and gangrene may commence around the needle puncture. When the instrument is removed, the eavity which remains is filled with soft dry charpie, the puncture is dressed simply, and the whole is supported by a bandage. The patient should remain on his sofa, not only until the cicatrisation of the puncture, but at least eight days longer, so that the fresh adhesions be not broken up by too early movements. In my second case I did not follow Wützer's plan of introducing lint into the cavity, but followed the advice of Rothmund, and endeavoured to procure union of the opposed surfaces of the plug by a graduated compress. No union, however, took place. After either plan, a firm plug is formed in the interior of the inguinal canal, and at first an opening or depression is seen in its mouth; but this entirely disappears after some months, although the plug remains in its place. After a lapse of years, the plug itself becomes gradually diminished, and can scarcely be perceived on examination.

In order to ensure permanent success, the patient should wear a suspensory bandage and a lightly-pressing truss for at least three months after cicatrisation of the puncture; otherwise the adhesions, while fresh and yielding, would be apt to give way, and the weight of the testicles, if not supported, might tend to draw down the skin of the scrotum to its original position. Powerful exercise of the body should also be forbidden until the truss can be left off.

Two important questions now suggest themselves: 1st. Is the evidence adduced in favour of this operation sufficient ground for admitting it within the province of legitimate surgery? and 2d. If so, in what class of cases should it be performed?

In answer to the first question, I can only refer to the imperfect account of its results with which I commenced this paper. Of 57 cases there reported, no death or dangerous symptom followed in any one, and the proportional success is large. Professor Wützer does not give the number of cases he has treated, but we may presume that it is considerable, and no death has resulted. I have heard that in one case at Brussels death did follow, but that the operation was very unskilfully performed, upon a patient suffering at the time from primary syphilis; so that this misfortune is not to be attributed to the operation, but to the operator. I think, therefore, that if any means are to be resorted to in order to cure hernia radically, that Professor Wützer's operation is that which is the safest hitherto adopted, and the one which offers the greatest chances of success. A truss is always inconvenient: it never gives perfect security against strangulation; it excites in many persons, especially during the first year or two of wearing it, a great deal of mental aunovance, reminding them of a defect in the neighbourhood of the genital organs; it diminishes the aptitude of the wearer for hard bodily labour or active exercise, for there is no truss which can be trusted to keep up a hernia in those who are employed to carry heavy loads, in seamen who have to do duty aloft, or in grooms; yet, as a rule, no warning suffices to keep men from such pursuits because they are ruptured. The cares of a family dependent on labour for support, habit which has grown up from early youth, and ignorance of the dangerous nature of the hernia, are all reasons against an alteration in fixed modes of life. If all this be taken into consideration, I think that the danger attendant upon such an operation as that I have described, when carefully performed, in fit cases, is slight, when compared with the disadvantages to which a hernial patient is exposed who has to wear a truss for the remainder of life; and therefore that we are bound not to neglect this operation.

As to the class of cases in which it is indicated, perhaps we might say—1st. In all strong, otherwise healthy persons, up to 40 or 45 years of age, who lead a life of active bodily exercise. In such patients where the hernia has only acquired a moderate size, has not become adherent, and where the long diameter of the inguinal canal has not been much shortened by the continued pressure of the intestine, we can most certainly depend upon the excitement of a passive exudative inflammation with subsequent adhesion—in other words, upon a radical cure.

The inguinal canal becomes wider, and at the same time shorter and narrower, the more extensive, old, and neglected the hernia may be. At length the shortness of the canal, the relaxation of its walls, and the large circumference of both rings, form so many impediments to a successful union: and the attempt at a radical cure will be more unsafe in proportion as these impediments increase. All this must be taken into account when considering the second class of cases in which this operation may become advisable, namely, in patients who have not arrived at the age of decrepitude, whose hernial tumours cannot be longer kept up by any mechanical assistance. This may be the case when the inguinal canal is extremely dilated and shortened; in certain species of omental hernia; in cases of great sensibility of the spermatic chord; and in persons with a fat, pendulous abdomen, upon whom the pad of the truss slips when they move. Such persons live in constant danger of strangulation; and in them herniotomy would be infinitely more dangerous than invagination, performed at a proper time. If the neglect have been carried to its highest degree, and the rings have become widely dilated, probably

no method of operation will avail to close them perfectly; yet the patient gains a great deal if, by such a proceeding, the evil can be at least so much diminished that a truss can be successfully worn. In one such case, operated on by Professor Rothmund, in an old woman who had a labial hernia which had reached the knee, four fingers together could be passed through the ring, and no truss was of any use; yet, although no radical cure was effected by the operation, it had the good effect that the hernia could be afterwards properly kept up by a truss.

Allow me to add, in conclusion, that whatever operation be proposed for the radical cure of hernia, it can only be successful when the whole inguinal canal can be so permanently closed by a new, firm, organic substance introduced into it, that, besides the spermatic chord or round ligament, no other parts can find their way through. All methods of cure which can only stop the passage through the abdominal ring must fail in their object, so long as any part of the inguinal canal is left open. In successful cases they may prevent the passage of an inguinal hernia into the scrotum, but are incapable of obstructing renewed protrusion of intestine into the inguinal canal—in other words, of preventing a relapse of the hernia. It is in this respect that Professor Wützer's operation appears to me to be so far superior to others, that I have ventured to bring it before the notice of this Society. It will be for the members to consider how far the evidence I have adduced of its safety and success should lead to its further adoption in this country.



OBSERVATIONS OF MORBID CHANGES

IN THE

MUCOUS MEMBRANE OF THE STOMACH.

DR. HANFIELD JONES.

DR. BENCE JONES.

Received April 10th .- Read May 23d, 1854.

It is not at all necessary for the object of this paper to give any detailed description of the structure of the mucous membrane of the stomach. It will be sufficient to refer to the works of Todd and Bowman, and Kölliker, and to state that my own observations are quite corroborative of the accounts they have given. On two or three points, however, a few remarks may be made.

I am inclined to agree with Kölliker that, in the normal condition, there are no glands in the pyloric region of the conglomerate kind or resembling a bunch of grapes. Bruch has stated that he has seen such, and so have I in many cases; but I believe the appearance to depend on a morbid change, in which partial destruction of some tubes takes place, while their remains become convoluted and massed together with adjacent tubes. The low villous prominences which are almost constant in the pyloric region, and occasionally exist in the middle, contain a quantity of nucleated granulous substance, identical with that which is seen in the villi of the intestine. This is liable to abnormal increase, and then spreads as an interstitial formation downward among the tubes. The existence of this nucleated substance beneath

the basement membrane of the intestine (large and small) has not been sufficiently noticed; it must be one of the first seats of morbid change in inflammation, and we have seen bacony matter deposited in it. When I commenced my inquiries into the morbid conditions of the stomach, I was not aware that "lenticular," or solitary glands had been seen in the mucous membrane. Dr. Todd and Mr. Bowman make no mention of them in this situation; Kölliker says, "the lenticular glands certainly do not occur constantly in the stomachs of adults, even if they are possibly always present in those of children, at least in very many cases one meets no trace of them. In others they are seen to be extremely numerous, covering the whole surface of the stomach, yet one can hardly forbid the thought that the diseased conditions of the part, which are always present, have much to do with their formation." From not imagining that they could be normal structures, I termed them simply "nuclear deposits," supposing that they were of new forma-This is, however, in all probability, not generally true, or rather it is true only in a restricted measure. In some animals the solitary glands exist in a very marked manner. If the mucous membrane of a pig's stomach be dissected off, and macerated in dilute muriatic acid, the whole splenic region will show a prodigious number of dead white, round or oval, bodies, the size of a pin's head or a little larger, lying on the deep surface of the mucous membrane, in which they are partly imbedded. These consist of masses of nuclei, with a very little granular matter. In the stomach of the eat they may easily be displayed in the same way, but are much swollen, and lie more completely in the substance of the mucous membrane; they are not confined to the splenie, but are seen in the middle and pyloric regions also. In a rabbit's stomach I could find no trace of solitary glands. In the stomach of a child, act. 5, who died of a severe burn in a few hours, and whose organs appeared to he all healthy, the glands in question were very numerous. After dissecting off the mucous coat from the muscular, and holding it up before the light, there were seen all

over the surface a great number of minute translucent spots, about the size of a pin's head, in which the mucous membrane appeared to be deficient, but was not apparently depressed. When the mucous membrane was placed in dilute hydrochloric acid, or in tolerably strong acetic, the translucent spots were changed, so as to present a dead whitish opacity. They were most numerous and large in the pyloric region, and were most apparent on the deep surface; in the splenic region they were more numerous than in the mid, and were quite distinct on the inner surface. They consisted almost entirely of masses of aggregated nuclei. In vertical sections these glands were seen lying at the bases of the tubes, and often extending upwards a good way into the substance of the mucous membrane. In a female, æt. 23, single, dying with scrofulous disease and abscess of one ovary, in an extreme state of emaciation, the stomach was found tolerably healthy. On examining the mucous surface, in the way above described, the same translucent spots were observed, in which the tubes were absent, while their place was occupied by nuclei and granular matter. In another female, æt. 19, dving of disease of the brain, set up by mischief in the ear, the stomach, except some mammillation in the mid and pyloric regions, was healthy. In the splenic region there were a great number of minute pin-hole depressions, well seen on looking at the surface by direct light, and appearing as translucent spots with transmitted light. Acetic acid rendered some of these opaque; dilute hydrochloric acid scarcely altered them at all. By microscopic examination it was evident that the tubes were absent in the situation of the spots, which were, in fact, minute cavities containing a few nuclear particles and some oily matter. In the first of these three cases (the child) I think the solitary glands were in some degree abnormally developed. I have not met with them so readily in the stomachs of other children of about the same age. The second case shows the condition in which, I believe, they usually exist in the healthy adult. The third presents them so atrophied as to cause a manifest loss of substance in the wall of the stomach.

It is difficult to fix any exact limit to the healthy development of these glands; all I can say is, that I should regard the gastric tissue as in its most normal and efficient state when there were but few of these glands (or nuclear masses) to be met with, and when those that existed did not encroach materially upon the tubes. It is probable that there are great individual varieties, that they are naturally larger and more numerous in some persons than in others. The idea occurs very forcibly to the mind that these solitary glands, and their groups in the intestine (Peyer's patches), have really no use, and fulfil no function in the human body, but exist in a rudimentary state, in obedience to the law of unity of type. They may almost be regarded as portions of undeveloped embryo substance, existing in inverse ratio to the surrounding specially organised tissues, and with this view their simple nuclear structure, the same that is so common in embryonic parts, is very accordant.

It is, I think, very nearly certain that the epithelial contents of the tubes are thrown off during digestion, and form an important constituent of the gastric juice, probably the so-called pepsin. The evidence for this view is the following:-In some instances the epithelial contents of the tubes do not extend up to the surface, i. e., do not occupy the fossulæ; while in others they are seen fused into an uniform mass, with remarkably definite outline which protrudes from the fossulæ on the surface, and resembles very much a villus or papilla. In one specimen I observed, in a vertical section, a layer of matter, apparently exuded epithelium, covering the surface, which was continuous beneath, with columns of epithelial substance rising out of the fossulæ. Dr. Beaumont seems to have noticed these papilliform protrusions of epithelium in the living organ, as he mentions that, on "applying aliment, or other irritants, to the internal coat of the stomach, and observing the effect through a magnifying glass, innumerable lucid points, and very fine nervous or vascular papillie, can be seen arising from the villous membrane, and protruding through the mucous coat, from which distils a pure, limpid, colourless, slightly viscid fluid." The

substance of which these papilloid masses are made up is much more homogeneous than the epithelium of the tubes, neither cells nor nuclei can be easily seen in it. The epithelial particles seem to fuse together as they are thrown off. This may serve as an answer to the objection which Kölliker seems to adduce, viz., that the proper cells of the tubes are not to be found at all constantly in the layer of mucus lining the surface. That this is the case I am quite convinced, for, on examining the stomach of a cat killed while digestion was going on, I found, on examining the layer of chyme in immediate contact with the surface, no trace whatever of any cell structure at all, neither of columnar nor spheroidal epithelium. In vertical sections of the mucous membrane there were, however, seen some masses of altered epithelium within the fossulæ, and ready to exude. On the other had, in the stomach of a man who died suddenly after a meal, I found the layer of acid mucus in contact with the surface to consist of abundance of epithelium from the tubes, as well as flakes of columnar particles. Also, in vertical sections, examined without any pressure, the surface was seen to be encrusted with a layer consisting of distinct cells from the tubes. The proceeding which Lehmann successfully adopted in the preparation of an artificial gastric juice, viz., scraping the surface of the mucous membrane with a spatula, and using the expressed matter, indicates pretty clearly that the contents of the tubes are poured out in the formation of the natural secretion. Probably the only difference between different individuals consists in this, that in some the epithelium liquefies completely before it exudes, while in others it exudes as a mass and liquifies more gradually. Though Kölliker doubts that the exuding of the epithelium is a constant and necessary occurrence in digestion, yet he holds that the epithelial contents are all necessary for the formation of gastric juice. I can corroborate the statement of this excellent anatomist, that the acid reaction is much more intense in that part of the stomach where (in the pig) the gastric glandular structure is most developed. This corresponds,

also, with the observation of Messrs. Todd and Bowman, p. 206, vol. 11, as to the greater digestive powers of the mid region of the pig's stomach.

The following observation relative to the condition of the gastric mucous tissue at birth, seems worth recording. stomach of a male infant, who lived only four hours, contained much mucus, of a reddish tint, and markedly acid. In the splenic region the tubes were not distinguishable in vertical sections; they were utterly overlaid and obscured by interstitial nucleated tissue. In the mid region the tubes were rather more distinct; there were numerous large cells of tubular epithelium seen, but the tubes themselves were very much obscured by interstitial nucleated tissue. Acetic acid brought the nuclei into view in great numbers. In the pyloric region the tubes were quite distinct, though there were here also numerous elongated interstitial nuclei. The blood in some of the injected capillaries of the villi was changed into yellow pigment (by the secreted acid). In this instance we have another illustration of the often observed fact, that the embryonic condition resembles very much certain diseased states of adult life. The tissue at a certain part of the ascending scale of development is very like, in its mere morphetic characters, to the same tissue when descending the scale of degeneration.

In the tables accompanying this communication, the following deviations from the typically healthy condition are mentioned:

1. Nuclear masses; these, as I have stated, are the solitary glands, and it is doubtful what degree of their development is to be considered as surpassing the physiological limit. It seems probable, both from actual observation, and from the behaviour of the same structures in the intestines, that they may become hypertrophied, and encroach abnormally upon the proper secreting tissue. Again, it is certain that they may undergo atrophy, and thus occasion loss of substance and thinning of the mucous membrane in the spots they occupy. Sometimes their atrophy seems to take

place by a kind of liquefying, so that a cavity is formed containing a clear fluid and some nuclear corpuscles. In other instances there is no distinct cavity, though there may be a depression on the mucous surface, and the mass appears to degenerate fattily, the wasting corpuscles being mingled with molecular oily matter, often in large proportion. From the large, probably hypertrophied masses, there is a gradual transition to the next form of change. It seems worth while to retain the term "nuclear masses," as it expresses correctly the constitution of the so called solitary glands, and, it being clearly understood that they are not actually abnormal structures, separates them in a marked manner from the proper secreting tissue.

- 2. Diffused nuclear formation, in extreme instances, extend uniformly throughout the mucous membrane. The nuclei are mingled with more or less granular matter, and the tubes are more or less atrophicd and obscured by the interstitial deposit.
- 3. Inter-tubular fibroid formation, this is very commonly associated with the preceding, and consists simply in this. that the exudation in which the nuclei lie, passes into the form of a more or less fibroid or homogeneo-fibroid stroma. In this, elongated or fibre-forming nuclei may sometimes be The material is very similar to that which thickens the Glissonian sheaths in some cases of cirrhosis. In some cases a change takes place in the tubes themselves, such that they become converted into nucleated substance, similar to that which surrounds them. Their epithelial contents are changed into a granular mass, containing many more nuclei than in the healthy state, while the homogeneous wall of the tube wastes and disappears, and so the intratubular nucleated mass blends with the extra-tubular, and the whole mucous membrane is converted into an uniform material loaded with nuclei. In extreme cases the tubes are utterly atrophied, and the whole thickness of the mucous membrane is occupied by fibroid or granular stuff, in which some altered remnants of the tubes may be brought into view by means of acetic acid. The basement membrane of

the surface is often absent in parts where there is much inter-tubular formation, and the nucleated fibroid tissue is then exposed. It may, however, have been covered in by the columnar epithelium during life.

- 4. The tubes appear, in some instances, to decay spontaneously, or, at least, not from the atrophic pressure of new formed fibroid tissue; the mucous membrane may then present a mere mass of granular and celloid débris, with interspersed fat vesicles and fatty matter.
- 5. Black pigment may be deposited in the mucous tissue sometimes in great quantity; it is occasionally within the tubes, more often between them. It appears in the form of granules and masses. In other cases yellow pigment is to be found. Both are to be regarded as proceeding from altered hæmatine.
- 6. Cystic formation is occasionally met with; it seems to take place in three ways: (1.) A nuclear mass liquefies, and leaves a cavity which is occupied by a clear fluid. (2.) While atrophy of the tubes is taking place, a portion of one becomes distended into a cystic cavity. (3.) A cyst is produced (de novo) as a large vesicle, a true new formation.
- 7. Mammillation is often seen in lesser degrees, and not unfrequently well marked. It affects especially the pyloric third or half of the stomach. To obtain a good view of it, or indeed not to overlook it, it may be absolutely necessary to wipe off a thickish layer of tenacious adhering mucus. It seems to be of two kinds, or to be produced in two ways. One may be called healthy, and appears to depend on some unusual contraction of the corium of the mucous membrane. That this may take place is very intelligible from the circumstance stated by Middeldorpf, and confirmed by Kölliker and Brücke, that there exist numerous organic muscular fibres in this layer. I have observed that this mammillated appearance is produced in some specimens in a very marked manner, or, if not entirely produced, rendered much more striking by immersing the mucous membrane in water, or in dilute acid, which seems to have a constringing action on some of the component tissues, probably the corium. The

other form of mammillation is morbid, and seems to be essentially connected with fissuring of the mucous membrane, or local atrophy. The thickness of the mucous layer is tolerably uniform in the healthy state, but in some cases when it is dissected off and held up to the light, it is seen to be much thinner in certain parts than elsewhere. The glandular layer seems to be, as it were, broken up into separate portions by fissures running through it. This condition may exist without any mammillation. A section made at right angles to the surface across a depression between two mammillæ shows the tubes in that part shortened, sometimes at the free surface only, sometimes at the deep also. The cause of the shortening seems to be in many instances the disintegration of a superficially seated nuclear deposit. The notching or depression thus produced is sometimes so deep as to fissure the mucous membrane quite down to its corium. In some cases the notching may be the result of simple atrophy, or superficial ulcerations, or such cracks as occur in psoriaris of the skin. The following case is a good example of atrophic change taking place extensively with partial conservation of the healthy structure: -A man, æt. 57, died from a fracture of the skull. The surface in the splenic region at its lower part presented numerous spots about the size of a pea, much more prominent than the intervening surface, and when held up to the light these spots were seen to be much less translucent than the intervals. These prominent spots were more numerous and closer together in the lower part of the mid-region, at the upper part of which, and in the pyloric, there was marked mammillation. The tubes were found to persist, and to be healthy in the prominent parts, while in the intervening thinner they were very much atrophied amid an overwhelming infiltration of nuclei, with circumscribed nuclear deposits at the bases of the tubes. It seems pretty clear that there is a good deal of analogy between morbid mammillation, the result of organic change, and the granular condition of a wasted kidney. The mammillations and the granulations are the parts where most of the natural tissue remains.

- 8. Gathering up of the lower parts of the tubes in the pyloric region so as to form a group of convolutions something like the acini of a conglomerate gland is often observed. It is not quite clear how the change is produced. It seems as if several tubes lost their upper parts by obliteration, and that their then remaining portions were drawn together and convoluted. In an extreme instance the groups of convolutions are found lying beneath the mucous surface, surrounded by fibrous tissue, and manifestly destitute of any outlets. In these cases the epithelial contents of the tubes are commonly fatty and wasted.
- 9. There is much difficulty in determining exactly what conditions of the epithelium of the tubes are unhealthy. Their contents are often of a very opaque fatty aspect, especially in their lower half; but this scarcely seems to be abnormal. In a few instances I have observed an apparently true fatty degeneration of the epithelium, the nuclei and cells being converted into shrunken fatty masses. Not unfrequently the epithelium appears more or less stunted and atrophied, or of a less soft, finely mottled aspect, and its cells look withered and shrunk. In the catarrhal condition it is pretty certain that it is not only the epithelium of the surface and fossulæ (the columnar), which furnishes the abundant mucus, but that of the tubes also, which is thus diverted from its proper use. Large cells from the tubes may not uncommonly be seen imbedded in the tenacious plasma. Sight, however, is quite inadequate to detect the qualitative changes which the epithelium in these and other cases undergo.
- 10. Self digestion, in slighter degrees, is of very common occurrence, and is invariably confined to or most marked in the splenic region. The nucous membrane is stained more or less deeply of a reddish colour, is less thinned, very slippery, difficult to hold so as to make a section, and semi-translucent. The tubes appear in some measure wasted, the submucous white filamentous tissue partly dissolved, and the blood in the vessels converted into yellow pigment. In much rarer cases the mucous membrane is destroyed, all except a slight coating that still remains along some of the vascular

ramifications which are seen coursing as black streaks on the white submucous tissue. The nerves and vessels are seen altered just as when they are treated with strong acetic acid; their nuclei are rendered very apparent.

11. Small dark red circumscribed spots seen on the surface of the mucous membrane are manifestly the result of hemorrhage, or at least of the exudation of hæmatine. The microscope shows in these parts an abundance of dark pigment granules. Sometimes in these spots ulceration is manifestly taking place; the surface is sunk, the basement membrane gone, the tubes quite lost, and replaced by a fibroid tissue infiltrated with yellow pigment. With regard to larger ulcers, such as perforate the walls of the stomach, I have not been able to observe anything to distinguish them from other ulcers, or anything that could account for their origin and progress. The base of the ulcer has appeared of a yellowish-grayish aspect, and some of the substance forming it has shown nothing but a low fibroid tissue, with more or less numerous corpuscles and granular matter, in which lie imbedded fat-cells and remains of vessels. In one instance there were numerous mould filaments in the base of a gastric ulcer, and in another instance in that of a duodenal ulcer; but I do not at all suppose that these had any essential counexion with the lesions. The tissues bordering the ulcer have not presented anything constant or to be specially noticed; sometimes they appear tolerably healthy, sometimes they are diseased in the same way as other distant parts, sometimes they are the seat of blood congestion, but this is not often the case. Ulceration, I believe, is essentially dependent on that which we cannot see; viz., a certain quality of the exudation, and a certain alteration of the nutrition of the tissue affected. It may, I think, be pretty safely asserted that examination of an extending ulcer of the cornea would show no peculiarity that could account for the progressive decay, and absorption of the texture. When separation is taking place. both the aided and unaided eve can see something of the process that is going on, but the destructive action is only XXXVII.

apparent by its results. When we understand the nature of the assimilative power, we shall understand also that of the ulcerative. The following highly interesting case, for which I am indebted to Dr. Bristowe, seems to me to have some bearing on the mode in which ulceration occurs:

"A girl, æt. 12, died at a late period of typhoid fever, from copious intestinal hemorrhage. She was extremely emaciated. There was hepatization and purulent infiltration of a large portion of the left lung. The lower part of the ileum presented numerous ulcers. But the most extensive destruction of mucous membrane existed in the colon, especially in the execum and ascending portion. From this part hemorrhage had taken place. The mucous membrane of the stomach had a peculiar appearance. It presented a very considerable number of depressions of a roundish, oval. polygonal, or very irregular shape, the area of which varied between that of a silver penny, and a quarter of that size. They appeared to be produced by atrophy of the mucous and submucous tissues. They were generally somewhat paler than the surrounding healthy membrane, and many were studded with black points, apparently discoloured vessels. The black spots, though most numerous in the depressions. were by no means confined to them. The morbid appearance was observed over nearly the whole stomach, but was deficient for an inch or two near the pylorus, and was perhaps most distinct between the cardiac and pyloric extremities. Not far from the pylorus was an irregular depression of the largest size, having all the characters above described, except that in its centre was a small oval darker-coloured pit in which the mucous membrane appeared to be deficient. It had the appearance of a contracting and imperfectly healed superficial ulcer, and the thinner mucous membrane round it was thrown into delicate scarcely visible folds." specimen which Dr. Bristowe kindly sent me the general surface was pale, the margins of the spots were rounded over smoothly, and not sharp cut. The spots were manifestly depressed, and the tissue was more translucent in them than elsewhere. On examination of vertical sections, the tubes

of the mucous membrane were found perfectly healthy; but in the depressions they were destroyed, their place was occupied by mere granular débris and oily matter, and the basement line of the surface was lost. There was no particular change in the submucous tissue. The healthy tubular tissue passed rather abruptly into the disintegrating, and there was no deposit or morbid formation of any kind in the parts affected. It was true and simple disintegration and perishing. No injected vessels were seen by the microscope, nor any pigmentary deposits as from exuded hæmatine. The morbid condition in this case was the result, I believe, of extremely depressed organic power. nutrition of the gastric mucous membrane, in particular spots, failed, and the tissue passed into a state of decay, it might almost be said, of sloughing. This was not identical with ulceration, but it verged nearly upon it, and had life been prolonged, would doubtless have passed into it; indeed, in the large depression near the pylorus, ulceration seemed actually to have occurred. The case may be regarded as a transitional instance between sloughing and ulceration, and illustrates both processes. Inflammation, it seems certain, had nothing to do with it.

12. The mucus which covers the surface of the stomach in gastric catarrh is generally very tenacious, adheres with remarkable pertinacity to the membrane, is neutral or slightly acid, and consists of an homogeneous-granulous fluid, imbedding very numerous columnar epithelial particles, and often more or less distinct remains of the contents of the tubes. The nuclei of the cells from the tubes persist long after the cells themselves are quite disintegrated, and may be seen in great numbers amid the plasma. They must not be mistaken for mucous corpuscles, which I believe are very rarely present. The columnar particles are more permanent than those from the tubes. Small fragmentary crystals of triple phosphate (as I believe them to be, from their solubility in acid) are very commonly seen in abnormal gastric mucus. The contents of the stomach are often of a dirty chocolate colour; in this case the fluid may be acid or alkaline; it

consists of watery mucous fluid, containing besides epithelial debris and remnants of food, numerous meshes of dark orange pigment: these I suppose to result from effused blood or exuded hematine, and to be only a less degree of the black matter which is often vomited in cancerous disease. I have observed torulæ in the mucus of the stomach of a diabetic patient.

The tables accompanying this paper have been drawn up from examination of 100 cases taken just as they presented themselves. This way of proceeding is of course less advantageous for ascertaining the symptoms that attend on diseased states; but it gives, on the other hand, a fairer view of the comparative frequency with which such states occur, and seems on the whole the best to pursue in breaking ground upon a subject which is in a great measure new. I am too well aware of the extreme liability to error which besets all statistical inquiries, to bring forward with anything like implicit confidence the results which seem deducible from these tables; I only produce this as a first effort for the ascertaining of points which will require further and more diversified and abler observation to settle completely.

The proportion of males among the 100 cases is very far above that of females, being 65: 35, or nearly double. This must be borne in mind in estimating the relative liability of the two sexes to diseases of the stomach.

I will first examine the influence of age and sex. It appears that out of the 100 cases, there were 28 that might be considered quite healthy, or nearly so. Of these, 15 were males, and 13 females, which indicates a decided less tendency to disease in the female sex.

There were 10 under 10 years of age.

13 ,, 20 ,, 16 ,, 30 ,, 19 ,, 40 ,, 23 ,, 50 ,,

The others ranged from 57 to 74. This result indicates sufficiently a tendency to maintenance of the healthy state

in the early years of life, and also demonstrates that organic change is no necessary attendant upon old age. In case 33 there were numerous sarcinæ in the stomach, and symptoms of their presence were observed during life. In case 43 there was the most extreme vascular congestion, which however appeared to be more of a passive than of an active kind, and to be produced chiefly in consequence of great fluidity of the blood, and venous engorgement. In case 62, though the glandular structure was generally healthy; there was an ulcer with thin edges, at whose base a vessel was seen nearly exposed; the mucous surface was also in a state of catarrh.

In 47 cases the splenic and mid regions of the stomach were either healthy, or not greatly diseased, while the pyloric was generally more or less affected. In a few of these the pyloric was as healthy, or more so, than the other regions, but in the great majority the reverse was the case. Of this group, 29 were males and 18 females, a ratio not very dissimilar to that which exists between the numbers of the sexes. This would indicate that the female sex is as liable as the male to minor degrees of disease. Of this series of cases,—

0	were unde	r 10 ye	ars of ag	ge.
5	11	20	,,	
14	22	30	,,	
22	11	7()	22	
33	,,	50	,,	
40	> 1	60	21	
Vhile	e 7 ranged	from 6	2 to 77.	

Here, again, age appears to exert a decided predisposing influence to organic change. In 2 cases (53 and 67) there were sarcine in the stomach; the latter was in a state of catarrh.

In 11 cases there was a moderate amount of destruction of the tubes. Of these 10 were males, 1 female, an excess on the side of the male sex which must be purely accidental, at least in the degree indicated by the numbers.

1 of these was under the age of 10 years.

2	" were	,,	20	33
3	,,	**	30	"
5	,,	,,	40	,,
10	11	,,	50	33

In 2 cases (Nos. 49 and 68) there were ulcers. In this group it is very apparent how the liability to disease increases with advancing age.

In 14 cases there was a great amount of destruction of tubes. Among these there were 11 males and 3 females. This result coincides with that obtained in the preceding group respecting the greater immunity of the female sex from organic change of the stomach. The numbers, however, are not sufficiently large to make the evidence conclusive. Of these 14 cases there were—

0 under the age of 20 years.
3 ,, ,, 30 ,,
4 ,, ,, 40 ,,
5 ,, ,, 50 ,,
8 ,, ,, 60 ,,
12 ,, ,, 70 ,,

One was 70, and one was 90. Here again the influence of advancing years is sufficiently apparent. In one of this group, No. 40, there was cancer of the pylorus.

Among the 100 cases were 6 of more or less decided ulceration, which are reckoned also in other classes with respect to the general state of the mucous membrane. It is rather remarkable that among these none were under 48 years of age. A case of perforating ulcer, which I met with after I had completed the above number, was 52 years of age. Including this one, there are seven cases, the average of whose ages is 59. This was to me an unexpected result, as I had believed, from the authority of others and my own previous observation, that ulceration occurred chiefly in young females. Of the seven cases, five were males, and two females. Rokitansky states "that the disease occurs chiefly at the period of puberty, and very often, particularly

in the female sex, as early as the tenth year." He further states "that it is invariably accompanied by chronic catarrh and blennorrhea of the gastric mucous membrane;" but this I think is hardly the case in England. I have not noted the existence of catarrh in more than three cases out of the seven, and in one of these it is doubtful whether it was at all marked.

In 16 of the 100 cases, the catarrhal condition was observed, the surface being covered with abnormal mucus in greater or less amount. Of these 10 were males and 6 females.

There were 2 under 20 years of age;

5 ,, 30 ,,

7 ,, 40 ,,

9 ,, 50 ,,

10 ,, 60 ,,

And 4 varying from 64 to 77.

The frequency of catarrh thus increases with advancing age; but the earlier periods of life are by no means exempt.

There were 9 cases in which the patients were known to have drank immoderately, and to these 2 more, subsequently observed, may be added. Of these 11, 1 was healthy; 6 were tolerably healthy, or not diseased in any great degree; in 1 there was a moderate amount of destruction of the tubes; and in 3 this was very great. From this it would appear that the habit of hard drinking has not a very marked effect in inducing degenerative disease of the glandular structure of the stomach. The last ease I examined especially bears out this conclusion. The man was only 49 years of age; he had been, as reported, "a drunkard and a very hard liver," in the East Indics, had sunk himself materially in the social scale by his misconduct, and died at last within a hospital mainly from debility. Except considerable hypertrophy of the heart, and a fatty state of the liver, there was no very decided organic disease. The mucous membrane of the stomach was much congested, except in the pyloric region. The splenic and mid regions presented a very tolerably healthy state of their tubular structure. In

the pyloric region the tubes were atrophied and obscured by interstitial nucleated fibroid formation. Just such a condition this was observed in numerous patients whose lives had certainly been very unlike his.

Among the 100, there were 18 cases of marked scrofulous disease, not including instances of tubercular deposit, which were but slight, or obsolete. In 4 of them the gastric structures were healthy. In 10 they were tolerably healthy.

In 2 there was moderate, and in 2 there was great destruction of the tubes. The conclusion is that scrofulous disease, using the term in its widest sense, does not exert any marked influence in the production of organic disease of the gastric gland tissue.

Without reference to microscopic examination, which, had it been possible, would have been most desirable, there are found among the 100 cases, 16 of renal degeneration occurring without marked disease of the liver, and 8 in which both organs were diseased. In the former group there were 3 in which the gland tissue of the stomach was healthy (1, however, of these was in a catarrhal condition, and had an ulcer); 5 were tolerably healthy, 1 being affected with catarrh. In 2 there was moderate destruction of the tubes, 1 of these presented two ulcers and a cicatrix. In 6 there was great destruction of tissue, but 1 of them had attained the advanced age of 90.

Of the second group of 8,—1 was healthy, 3 were tolerably healthy, in 3 there was great destruction of the secreting tubes, and in 1 only moderate.

Taking the two groups together, it appears that in one half the whole number there was decided organic change, while the remainder were tolerably healthy, except that one was ulcerated. This result points certainly, I think, to the existence of a tendency in renal degeneration to be associated with similar change in the stomach. That age is not the real cause of the degeneration in the diseased cases appears from taking the average of the ages in the two sets; in the healthy it is 52, in the diseased 51.

There were 12 cases of heart disease, chiefly dilated hypertrophy. 5 of these coincided with renal and hepatic degene-

ration, 1 with renal degeneration only Of the 12,—4 were healthy, 3 tolerably healthy, in 2 there was moderate destruction, and in 3 there was great destruction of the stomach-tubes. In 1 case of moderate destruction there were also two ulcers and a cicatrix. The stomach disease coincided with renal and hepatic (one or both) four times, once it did not. From this it appears that heart disease, with its usual attendant of venous engorgement, has probably no great influence in the causation of degeneration of the gland tissue of the stomach. In case 43, where the whole vascular system of the stomach was intensely congested, the tubes appeared tolerably natural.

Among the 100 there are found 7 cases of cancer, and to these may be added 2 more subsequently observed. Of these, 1 was healthy, 5 tolerably healthy, and in 3 there was great destruction of the tubes. In 2 of these cases the pyloric region of the stomach was itself the seat of the cancerous disease. The record of the healthy or degenerated state relates of course to the condition of the remaining mucous membrane. As the greater number of the cases were tolerably healthy (as far as regards the stomach), as in one of the diseased there was coincident degeneration of the liver and kidneys, and as the average of the ages of the diseased is considerably above that of the healthy (59:40), it cannot be affirmed that cancerous disease has much potency in inducing degeneration of the gland tissue of the stomach.

In only 3 cases out of the 100 is there mention made of the patient's having suffered from chronic rheumatism or gout. In all of them there existed also renal degeneration, and it is not possible to say whether this or that was the cause of the great destruction of gland tissue which prevailed in 2 of the 3 cases.

There are 2 cases of diabetes, in both which the gastric tissue was tolerably healthy.

I am inclined to hope that the appended tables will furnish a good deal of illustration of diseased states of the stomach, which can scarcely be embodied in formal deduction. To aid the reader in his survey, I add references to the cases

which seem most worth his notice. Instances of great destruction of the secreting tubes: Nos. 2, 5, 8, 19, 29, 40, 44, 59, 63, 69, 76, 90, 92, 93. Instances of ulceration: Nos. 6, 7, 49, 62, 68, 80. Instances of the catarrhal state: Nos. 11, 24, 27, 34, 45, 48, 54, 57, 62, 67, 72, 74, 77, 80, 93, 99. Instances in which scrofulous disease was well marked: Nos. 11, 16, 26, 34, 37, 39, 46, 47, 54, 57, 61, 63, 66, 79, 90, 91, 95, 100. Instances in which renal or renal and hepatic disease existed: Nos. 3, 13, 19, 20, 22, 27, 29, 32, 35, 40, 43, 49, 62, 63, 69, 74, 76, 83, 84, 87, 90, 92, 93, 94. Instances of diabetes: Nos. 14, 79. Instances where cancer existed: Nos. 5, 7, 15, 28, 40, 61, 77. Instances in which the patients had been addicted to drinking: Nos. 3, 4, 5, 19, 26, 68, 80, 82, 93.

With regard to the symptoms by which these morbid states might be expected to declare themselves, it has been matter of great disappointment to me to find that they are so obscure as to be scarcely at all noticed in the records to which I have had access. The following case shows that considerable wasting of the glandular tissue of the stomach may take place without any apparent symptom.

E. G., female, married, act. 52, had been subject for eight years to epileptic fits, occurring very frequently. In one of these she set her clothes on fire, and was burnt severely. She lingered for rather more than a month, and died. She always had good digestion, never complained of pain in stomach, could eat any kind of meat. Was very strong and well nourished. All the organs appeared healthy except the stomach, on the surface of which were several ecchymosed spots, and the ileum and elecum, in which were patches of deep red congestion. Microscopie examination showed the tubes in the splenic region tolerably healthy; those in the mid-region were utterly atrophied, and replaced by a fibrohomogeneous stroma, densely loaded with nuclei and granular matter; those in the pyloric region were also extremely wasted, and lost amid fibroid formation.

It is possible that in this case the part of the mucous membrane which retained its healthy structure was able by increased activity to compensate for that which had perished, and to supply an adequate amount of gastric juice. It is, however, remarkable that so considerable change should have occurred without any local symptoms. This probably depended on the atrophic process having been very gradual. Similar instances of latent, though most serious changes, are met with in other parts—as the cardiac valves, the liver, and kidneys; so that the circumstance is by no means without parallels. In the above case, and in others of the same kind recorded in the tables, I believe the change to have been quite independent of inflammation; but in the following case (for which I am indebted to the kindness of Mr. Ancell), attacks of inflammation seem to have been the efficient cause of the morbid state.

A man died about the age of 50, in a state of atrophy and exhaustion. He had suffered for years from dyspepsia and congestion of the liver. The earlier attacks were of an acute character, and were relieved by blisters; the later were of a more chronic kind. He was several times slightly jaundiced, and his skin at last assumed a permanent dingy, greenishvellow hue. He was much troubled with sickness. Gentle alterative treatment was of much benefit in the earlier periods of his disease, but latterly nothing did him any good. The autopsy showed some diminution in size of the liver. whose cells were much loaded with yellow pigment; there was some thickening of the capsule. The bile was exceedingly vellow, rather abundant. The kidneys were large, very highly congested, and their capsules very adherent; their tubes contained fibrinous casts, and the epithelium was unhealthy, containing a great deal of oil. Small concretions of carbonate of lime were impacted in the mammellæ. The mucous surface of the stomach was marbled and mottled over about its middle; towards the cul-de-sac it was the seat of punctiform injection if not of extravasation of blood. In the part which was microscopically examined, there was very little trace of the tubular structure, the tissue was completely pervaded by nuclear deposit.

I am satisfied that this stomach was extensively affected

by atrophy of its proper tissue, with interstitial nuclear formation, although, as I had not then directed my attention specially to morbid conditions of this organ, the examination was not so satisfactory as those which I have made recently. By a reference to the groups of different cases given above, it will be seen that the catarrhal state is by no means coincident with destruction of the tubes either in its greater or lesser degree. Now the catarrhal state implies a degree of inflammation of the mucous membrane, but this does not seem to have any marked influence in producing the interstitial deposit which coincides with atrophy of the secreting structure.

In concluding this paper, which I feel is but a first labour in a hitherto little cultivated field, I cannot but remark how strongly the degenerative tendency characterises the disease of the present day. We know not whether it was so in former times, but for ourselves the lesson is plain and clear, that the integrity of the vital force, which we call health, must be carefully cherished if it is to be long preserved. From diminished vital power there is no great step to organic decay; and if the one exists any length of time, there is too much reason to fear that the other is in progress. If the researches I have made do nothing more, they show that degenerative change in one important organ is no unfrequent event, and it requires but a moderate pathological experience to show that the same is true with respect to many other parts. How does it then behove us to look out for and anticipate, as far as possible, these insidious disorganising processes, against which our therapeutic endeavours are often so unavailing!

It is a pleasant duty to acknowledge the very kind assistance I have received while engaged in collecting the observations above recorded from the medical staff of St. George's Hospital, and from my colleagues at St. Mary's. To the curators of the museums at both these institutions I have to offer my best thanks for the many friendly offices they have done me, as well as to Mr. Philliten and Mr. Mushen, resident officers at the Marylebone Infirmary.

Cases of Morbid Changes in the Mucous Membrane of the Stomach.

ses of motora changes in the	Age. Sex. History. Discase latal. rost-morten examination.	F. Ill 3 weeks or more with Body emaciated; pale. Por-fever; improved; she was ap-tions of both lung consolidated, quite pale. proaching convalescence; ap-Kidneys unusually firm.	Heart large; walls rather hyper- trophied; valves of left side thick- ened, but efficient. Organs gene- rally healthy.	Nursery gardener.—Has Right lung in great part couso. Mucous membrane in some parts dark lived and drank hard at times, lidated. Pericardium adherent to stained, for the most part of a light pale Rhematic fever 10 years ago, heart. Liver pale and granular pink. In the discoloured parts there is a Died of fever with pneumonia Kidneys not much wasted, but of deposit of black pigment in and between the tubes, in other parts there are small deposits of yellow pigment. Splenic region—tubes weight at cpigastrium, as if the pale of the property of disintegrate; their epithelm is atrophied. Mid region—tubes tolerably beginned by the parts there are small deposits of yellow pigment. Splenic region—tubes tolerably reaching. Mid region—tubes tolerably reaching the parts there are small deposits of yellow pigment.	40 M. Labourer, — A drinker. Heart large and flabby: lining Mucous surface pale; reaction feebly acid While intoxicated injured his membrane blood-stained; blood splenic, middle, and pyloric region quite hand so that amputation of all fluid. Liver affected with mar-healthy. Labourer, and metacarnal ginal fatty degeneration. Lange
Cuses of		F. III 3 fever; in proachin petite w		M. Nurse lived an Rhenma Died of 2 weeks plained weight nothing	
	lge.	r0			40
	Name.	E. Caswall.	T. Powell.	J. Lawrence.	W. Leary.
-	No.	-	64	m	

Condition of Stomach.		Engaged in business. Not Left lung and heart throughout, lesser curvature; natural to the eye in the much. Has drank especially opposite sixth rib and lesser curvature; natural to the eye in the much. Ill 10 months, feeling costal cartilage, where there was greater part of its extent. Cardiac region—wask and coughing. Has an oblong, firm, encephaloid, flat-tubes very much atrophied by interstitial marked areus senilis. Diges—tish mass. At the root of this formation of nuclei and fibroid tissue, some getting worse. He died with ously diseased bronchial glands, thickened and beset with nuclei. Mid reprofuse hæmoptysis. and the tissue around was soft gion similarly affected, but not quite in the and broken down as from effused same degree. There appeared to be fattily blood. Right lung and other or-degenerating nuclei masses, and small fat gaus healthy. No fatty degenera-cells here and there. The basement mention of cardiac fibres. brane was perfect. Pyloric region—tubes distinct, though still rather obscured by	Widow, charwoman.—Has Dropsical effusion in pleure and Stomed rather large, presented a circular had good health generally: 11 peritoneum. Left ling cedenatous contraction 2½ inches from pylorus. Inchildren. Admitted suffering and emphysematous; right lower ternal surface pale, rugose, of natural aspect, with dyspaca, dropsy, and dec. lobe nearly consolidated from effu except the lesser curvature on the posterior hility. Urine not albuminous, son of bloody third. Heart flabby; surface, where there were two nleers, a purpuric spots on its surface; larger one quite circular nearer the cardia. Liver slightly granu-Their margins were not much thickened, lar. Kidneys not wasted; surface evenly rounded, and devoid of the least smooth; very firm. On the serous surface corresponding to the plast. There was much highly acid duid
Post-mortem Examination.	bone had to be performed congested posteriorly. Kidneys Tetanus came on. He dical healthy; a cyst the size of a nut on 11th day after admission, on the left.	Left lung and heart throughout, especially opposite sixth rib and costal cartilage, where there was an oblong, firm, encephaloid, flatish mass. At the root of this lung there was a mass of cancerously diseased bronchial glands, and the tissue around was soft and broken down as from effused blood. Right lung and other organs healthy. No fatty degeneration of eardiae fibres.	Dropsical effusion in pleure and peritoneum. Left ling ordematous and cmphysematous; right lower lobe nearly consolidated from effusion of bloody fluid. Heart flabby; purpuric spots on its surface; valves healthy; mitral somewhat thickened. Liver slightly granthickened. Liver slightly granthickened; surface smooth; very firm.
History. Disease fatal.	bone had to be performed congested Tetanus came on. He dicch healthy; a on 11th day after admission, on the left, and 3rd of tetanus.	Engaged in business. Not hard worked. Has drank much. Ill 10 months, feeling weak and coughing. Has marked areus senilis. Digestion good until last 2 months, getting worse. He died with profuse hæmoptysis.	Widow, charwoman.—Has had good health generally: 11 children. Admitted suffering with dyspnea, dropsy, and delility. Urine not albuminous. Died by asthma in 2 days.
Age. Sex.		N.	Ţ <u>r</u>
Age		75	0:
Name.		Jas. Walker.	M. Stark.
01.		n	9

S D a of a a s.	Jaundiced on admission; There was great ascites and abdomen tense and tympa-muhe effusion into left pleura, marbled near the pylorus. Splenic region—nitic. Il get yery weak; Jangs emplysematons. Heart no tubes discernible; they are replaced by lost appetite. Died on 13th small; valves rather thickened, nucleated fibroid tissue. Mid region in nearly day after admission. Some Universal chronic thickening of same state; some nuclear masses at the purprinc spots on elack. The performance is and soft, solid, fibri-bases of the tubes. Pyloric region—tubes jaundice appeared 5 months nous exudation in subsecons tissue extremely atrophied in the same way. There hess before; was never well small; not manifestly discased; surface. The basement membrane was dissenter, he had no ill-of recto-vesical fossa. Kidneys was a very little exuding epithelium on the ness before; was never well small; not manifestly discased; surface. The basement membrane was disafter. Some before death; he had no ill-of recto-vesical fossa. Kidneys was a very little exuding epithelium on the ness before; ells loaded with pigment, mucous tissue was quite natural. The sub-particular and numerous collections of green or crange pigment throughout the premetalyma. Duets com. chol.	M. Pelvis crushed by falling tim.— Thoracie and abdominal viscoria Splenic and mid region—tubes healthy. ber. He died in about 2 days, healthy. Bladder and urethra la-Pyloric region is spotted and stained by black
i	.i.	M.
13 14	20	4.1
K. Westover.	M. Kenny.	E. Cude.
15	30	5

Post-mortem Examination . Condition of Stomach.	cerated. Both pubic bones frace pigment; the tubes are much wasted, and tured. In some parts are quite lost; there is much interstitial fibroid tissue. The epithelium of the tubes is fatty, and there is much oily matter scattered about them, and even in the corium. Had good health until 9 Body in good condition. Brain Reaction acid. Splenic region—tubes tomoths ago; since then difficant thoracic viscera healthy. Two lerably healthy in some parts, wasted very early in making water. On ulcerated openings at the upper much in others; some nuclear deposits at admission, retention of urine part of the bladder were filled up bases of tubes. Mid region covered with for 24 hours. Urine drawn by the intestines. Peritonitis and tenacious white mucus, consisting of epitheoff excessively offensive, alka, purulent exudation. Mucous lining lium from the tubes; its surface was pale, line, turbid, loaded with triple of bladder very congested, and of and its aspect healthy; tubes very much obserbates.	, and tubereles t; vomice at healthy. Liver	Injury to head. Fell into Fracture of frontal and both Splenic region and mid region—tubes very coma, and died during the parietal bones. Masses of coagu-healthy. Pyloric region—tubes tolerably night.
History. Disease fatal.	Had good health until 9 Body in good compute a good ince the diffi- and thoracic viscer cally in making water. On ulcerated openings admission, retoution of unine part of the bladder for 24 hours. Urine drawn by the intestines, off excessively offensive, alka-purulent exudation, line, turbid, loaded with triple of bladder very con line, turbid, loaded with triple of bladder very con loss phates.	Appetite good. Urine became almost black, opaque, and incolerably fetid. He died in a comatose state, having previously had some pain in abdomen, the bladder being empty. Cough 1 year. Admitted Lungs with muco-purulent, and scattered bloody expectoration. Legs both apic very codematous; urine slight-enlarged by albuminous.	to head. Fell into nd died during th
	1084011	TABRER STEEL	Injury coma, an night.
Sex.	N.	×	N.
Age. Sex.	75	61	88
Name.	10 G. Chambers.	R. Goulding.	D. Ford.
No.	10	=	22

M. Ill 14 days with cough and the several parts was bruised and soft-ing quite into the corium. Several parts was bruised and soft-ing quite into the corium. Several parts was bruised and soft-ing quite into the corium. Several parts was bruised and several fluid in lateral and much severally severally side, and much sero-purulent fluid in pale, with some patches of injection near Tongue brown and dry; skin right pleura. Right lung's lower pylorus, and some manmillation in the same cold; extreme depression lobe consolidated, inflirated with jart. Splenic and mid regions—tubes very breath of fetid and gangre-lymph and pus, in part gangrenous healthy, with fibroid formation extending nous odour. Died I day after and hoke nown. Upper lobe of between them at their bases. Pyloric reperioration. Liverlangeand coarse. Kithers very large, notthed, in the same constant in the same cold in the same c	Much emaciated. Passed, on seess, containing 35 of dark brown white colour. Splenic region—very much admission, 10 pints a day of and fettid pus in apex of right altered by self-digestion. Mid region—sacharine urine. Appetite lung, and several patches of more lunks perfectly health; epithelium fatty, had been very good; had or less solid ecophastic deposit; some nuclear deposits. Pyloric region—failed much lately. He used Similar patches in left lung; other rightelium wasted, fibroid formation in some to take 170 oz. of milk daily, viscera healthy. Kidneys natural, parts, and nuclear deposit in others.	F. Manmary scirrhus of 1 Firm encephaloid tubercle-like Reaction slightly acid. Splenic and mid gradual sinking. Died by masses in interior of lungs and region—tubes healthy, with nuclear formagradual sinking. It is a special sinking the series of the series of the series of distinct, with some interstitial fibroid observation.	Ill 5 months off and on; General tuberculosis. Lungs very much emaciated. Symp-quite stuffed with tubercles. A few in liver and kidney. Mesenteric glands affected.
			표:
25	53	mths.	70 mo
J. Bowen.	J. Thibel.	M. Callaghan.	E. Parfitt.
≃ xxxv11.	7	<u> </u>	16

Post-mortem Examination. Condition of Stomach.	Fell out of a cart on his body in good condition. Blood head; convulsions came on extravasted under scalp and in part. No vascular injection. Splenic and some hours after; they be-the subarachnoid spaces at the mid regions—tubes very healthy; epithelium came continuous, and he died vertex, chiefly on the left side fatty in lower parts, slightly fibroid thick-surface of the state	Rheumatism; pericarditis; Pericardium adherent by soft Reaction acid. Splenic region—tubes great restlessness and distress; lymph to heart, externally adhered healthy. Mid region—tubes not wasted, slonghs formed on back; to ribs and langs, which were but much obsenced by fibroid formation. death by asthenia in 4 weeks, engorged; pleuritic lymph exuda. Pyloric region in same state. Epithelium tion on both sides. Heart healthy, of tubes exuding abundantly.	Gout hereditary in family. Whole body dropsical and ex. Splenic region—highly congested; tubes has had several attacks. Has sanguine. Brain pale; of good so obscured by fibroid and nuclear formanot lived at all regularly. Ge-consistence. Lung cedematous, iton that they are searcely to be seen; some neral anasarea came on after congested at back; fluid and lymph are undergoing fatty degeneration. Mid getting wet. Is a painter and in pericardium, region—tubes in same state; a large nuclear glazier. Urine albuminous, Peritoneum contained much lblody accumulation at the bases of the tubes in and containing casts. Gontap-fluid and fibrinous adhesions. Kid- one part encroached considerably upon them, peared in wrist 3 days before neys rather small, pale, granular, least the recoached considerably upon them. Pleurisy and ascites and mottled.	Servant.—Has always lived Servant.—Has always lived and pleased healthy; 4 oz. Reaction acid. Splenic region—tubes to servant. Admitted with fracture of fluid in left plears; lower lobe lerably healthy; some large nuclear deposits of femur; 2days after delirium of left lung completely hepatized, encroaching on them. Mid region—tubes tremens appeared; he improv-land whole of right. Heart healthy, rather wasted; some encroaching nuclear ed, and went on well, except Caleareous deposit in aorta and deposits. Much fat in submucous tissue of
History.—Disease fatal.	Fell out of a cart on his head; convulsions came one some hours after; they be-teame continuous, and he died in 4 days.	Rheumatism; pericardi great restlessness and distr sloughs formed on ba death by asthenia in 4 wee	Gout hereditary in family; Whole bo has had several attacks. Has sanguine. not lived at all regularly. Ge-consistence. neral anasarca came on after congested at getting wet. Is a painter and in pleuræ glazier. Urine albuminous, Peritoneum cand containing casts. Gontap-fluid and fibr peared in wrist 3 days before neys rather death. Pleurisy and assites and mottled.	occurred during illness. Servant.—Has always li well. Admitted with fract of femur; 2days after delir tremens appeared; he impled, and went on well, exc
Sex.	N.	ř.	N.	N.
Age.	46	17	35	09
Name.	W. Cox.	E. A. Perren.	J. Edgeson.	N. Sampson.
No.	12	00	6	50

that no union of the fracture other largearteries. Liver healthy, these two regions. Pyloric region—tubes took place. About a month af. Spleen small and pulpy. Kidneys, healthy; unobscured. ter accident, chest symptoms surface granular and wasted. Very came on, and hedied in 3 days. imperfect formation of callus. Admitted with fever in an Body conaciated; addonen disserted; addonen disserted; and scropurulent exudation had posit, which in one specimen was so consepigastric pain; slept little, been set up by the irritation of the siderable that it formed a layer nearly as mucons coat of the ileum; one of think as the remaining depth of the tubes these had perforated the intestinal on which it had encroached. Mid region—wall, but adhesions had prevented tubes healthy; slight fibroid formation enthe escape of contents. Abdo-croaching on their bases. Pyloric region—minal viscera healthy. Lungs contubes remarkably healthy, and unobscured. Settle the thealthy. Blood everywhere	Never had rheumatic fe. Left ventricle of heart very Mucous membrane appeared healthy, ver. Ill, more or less, 18 much hypertrophied. Mitral curletuce more pinky than natural. Splenic repears with palpitation of tains and corder tendin. thick-gion—tubes tolerably healthy; some fibroid heart; more last year; nucled; orifice contracted. Aortic formation at their bases. Mid region—tubes able to do his work as a valves thickened. Surface of very much obscured by fibroid deposit and costermonger. Ansagrea; or aorta rough and puckered by much wasted. Pyloric region—tubes not thopmea; heart greatly en-semi-cartilaginous patches. Kid-much wasted, but obscured a good deal by larged; systofic bruit in left neys diseased, enlarged, and intersitial fibroid formation. Basement safter weak and unequal, cirrhotic. Lungs engorged; lower exuding epithelium. Abundance of fat in Lungs engorgel; absolute lobe of left condensed by Oiss of sub-mucous tissue. Lange sass, glo-meruli, indid in pleura. David and globules. Died may be able to
pi.	ž.
10	3. 13.
Eliza Baker.	H. Boyce.
231	22

	ssting food, the epithe- ty at their intertubular ry tolerably nuclear de- t, advancing ausing local very abun-	overed with tubes not broid tissue. encreaching dant. Mid as splenic; of the mu tubes not by much in- ees exist at ubes, Frag- the tissue.
Condition of Stomach.	contained dige egrous; in both, nes is very fat wasting; no region, tubes ver re were some ith oily matter corium and c clium exuding	surface pale, c. Splenic region- imbedded in fil- very marked of pithelium abundhe same state on the substance Pyloric region- i, but obserred I, intelear mass aching on the that aching on the that aching on the than anatter seen in
Cond	Reaction acid contained digesting food Sphenic and mid regions; in both, the epithe-linm of the tubes is very fatty at their deper parts; no wasting; no intertubular deposit. Pyloric region, tubes very tolerably healthy, but there were some nuclear deposits, mingled with oily matter, advancing nywards from the corium and causing local wasting. Epithelium exuding very abundantly on surface.	Reaction acid; surface pale, covered with much much. Splenic region—tubes normuch wasted, but imbledded in fibroid tissue; Nuclear deposits very marked encroaching on the tubes; epithelium abundant. Mirregion in nearly the same state as splenic nuclear deposits in the substance of the much materially wasted, but obscured by much in fleerstitial deposit; nuclear masses exist a their bases, encroaching on the tubes. Fraguents of bacony matter seen in the tissue.
Post-mortem Examination.	Ill 6 months with cold and cough. Palpitation 2 very much enlarged and dilated; Splenic and mid regions; in both, the epithemonths ago. Three days ago folled with enormous black clots, lium of the tubes is very fatty at their had been periearlial adhesions. Large deeper parts; no wasting; no intertubular had hemiplegia of the right rough vegetations on miral flaps; deeper parts; no wasting; no intertubular had hemiplegia of the right rough vegetations on miral flaps; deeper parts; no wasting; no intertubular had hemiplegia of the right rough vegetations on miral flaps; deeper parts; no wasting; no intertubular had hemiplegia of the right rough vegetations on miral flaps; deeper parts; no wasting; no intertubular had had hemiplegia of the right hung condensed; contained traces posits, mingled with oily matter, advancing fral hunit. She improved in 2 Right hung condensed in some wasting. Epithelium exuding very abunmonths very much, and was degree, and presenting some small dantly on surface. The read of severe pain in Liver cularged; very firm, an attack of severe pain in Liver cularged; very firm, eruption of acc, and sonorus with a fibroid formation was from any condensed; and taking place in them. Kitheys tolerably soon after slightly albumi- healthy; fibroid formation was moust, codema appeared, and taking place in them.	Admitted with tecensive Marked pallor; general ana. Reaction acid; surface pale, covered with strumous disease of left sarca. Right hung, upper lobe much mucus. Splenic region—tubes not elbow and hand, and right hepatized incompletely; lower much wasted, but imbedded in fibroid tissue, ankle. Five weeks after, an lobe lealthy. Left lung healthy: Nuclear deposits very marked encreaching attack of violent diarrhoa, no tubereles in either. Bronchial on the tubes; cpithelium abundant. Mid asso of adark olive green, and posit. Kidneys enhanged; sur-nuclear deposits in the substance of the much ingly albuminous; abdomen faces very white and smooth, cous membrane. Pyloric region—tubes not distended. In 16 days after, liver large; tolerably healthy, materially wasted, but obscured by much in the died; having passed lat. Spleen much enlarged; contained terstitial deposit; unclear masses exist at deposits of bacony matter. Sone their bases, encroaching on the tubes. Fragsero-purulent fluid in belyis. Manch Manch
Post-mort	Body much en lery much en Solled with en Solled with en cough vegetat anortic valves much condens of recent and Right lung degree, and preavities filled Liver enlarger dark. Splees with a fibroit margin. I healthy; fibr	Marked pa sarea. Right hepatized in lobe healthy. In or tubercles iglands enlarge post. Kidin faces very Liver large; Spleen much deposits of ha sero-partient
History Discuse fatal.	Ill 6 months with cold body much emaci and cough. Palpitation 2 very much enlarged months ago. Three days ago filled with enormons thad a fit; after which si he Some pericardial adhe hemiplegia of the right rough vegetations on side, and speech was affected, aortic valves healthy. This was not of long duration. Buch condensed; cor There was a loud systolic mil- of recent and older extra bruit. She improved in 2 Right hung condens months very much, and was degree, and presenting an attack of severe pain in Liver enlarged; very eardiac region, with roseolar dark. Spleen large, eartigion on face, and sonorous with a fibroid nodult who are slightly albumi; healthy; fibroid for nous; codema appeared, and taking place in them.	Admitted with recensive strumous disease of left elbow and hand, and right ankle. Five weeks after, a attack of violent distribus Twenty-four days after, urium so a dark olive green, and highly albuminous; abdomer distended. In 16 days after the distribution highly albuminous and highly albuminous; abdomer distended. In 16 days after the distribution highly are mined.
	and cough. months ago. had a fit; aft had bemiplegi side, and speec This was not of There was a lo tral bruit. She months very in about to be disc an attack of s cardiac region, eruption on face riales in left clie soon after sli nous; cedema the face was m	
100		×.
Age. Sex.	in a	ts.
Name.	L. Gunden.	Jas. Mortimer.
No.	53	či či

mative nephritis after sear-ricardium. Lungs ædematous. regions—tubesperfectly healthy; epithelium very fatty. Pyloric region—tubes healthy, toms. Aways a hard drinker; Thereles and vomicæ in both Reaction acid. Appearance healthy, much exposed to weather; lungs. Heart healthy. Kidneyssmelling of brandy. Spienic region altered subject to winter cough; of normal size, dark, and con-in some measure by self-digestion; tubes much emaciation; worse last gested. White pericardial patch, natural. Mid-region—mammillated tubes 5 weeks; no hæmoptysis. He soon sank and died.	healthy. Lungs very ous; right rather con- and softened. Heart several pericardial ad- Adhesions on surface of its tissue soft; highly con- Both kidneys excessively.	Was extremely exhausted Body pale and emaciated. Aspect healthy. Reaction acid, ruge from previous illness and old Much bloody fluid in both pleure, marked, empty. Splenic region slightly age. Diarrhora at intervals Lungs emphysematous. Heart mammillated; tubes tolerably healthy; during last month. Abdo-healthy. Serious and fibrinous some fibroid formation at their bases. Mid men became tympanitic and effusion in peritonsum. Twenty-region—tubes healthy. Pytoric region—painful. Two days after, slicfive gall-stones in gall-hadder, unives not materially wasted; lower ends and much dark black bile. Liver convoluted; much intertubular fibroid confained several masses of hard formation. Rectum.
Died with acute desqua- mative nephritis after scar-rif latina. No stomach symp- toms. Always a hard drinker; much exposed to weather; subject to winter cough; much emaciation; worse last g b weeks; no hæmoptysis. He soon sank and died.	Twenty-four years ago had a paralytic stroke; lately, œdemat 2 fits. Has pains all over densed head; increased greatly by healthy coughing; has a continual hesions noise in his head the last liver; if weeks. There is a large gested. Garbuncle on the side of face, wasted. He sank into coma and died.	
M. M.	N.	E.
6 88	49	20
— Scales. M. Halcy.	J. Macreath.	M. A. Little.
25 26	50	X 2

Condition of Stomach.	Of rather full habit. Face General anasarca; much serous Strongly acid chyme in stomach. Splenic and neck purple from con-effusion in left pleura, compress-region—uncous membrance dark-coloured, gestion. General dropsy, ing left lung, which was healthy thinned; tubes very much disritegrated; a dyspnea, and cough for las well as the right; a small peri-prodigious amount of fibroid formation in month. Heart's action irre-cardial patch. Heart's cavities sub-tubular tissue and corium, which is gular. Pulse remarkably all dilated; left ventricle hyper-all full of elongated and fibre-forming feeble and irregular. Ex-trophicd. Considerable calcare nuclei. Mid region—tubes more or less pectoration rusty and adhe-ous deposit in miral valve. Much completely broken up; their debris mingled sive. Urine scanty, loaded, fuid in peritoneaum. Liver small; with melanic granules. Floridi formation singlightly albuminons. Died its capsule contracted in manyas in splenic region. Pyloric region—tubes parts. Spleen small; firm; cap-tolerably healthy, involved in much fibroid sule opaque. Kidneys congested; thickening; lower ends rather convoluted, firm; capsules adherent, surfaces and epithelium fatty. Muscular coat granular and cysted. Ereatly thickened near pylotus. Sub-mucous tissue not indurated. No con-	A footman. Was exposed Lungs rather engorged poste- to the cold outside a carriage riorly; other viscera of chest and gestion; but intense injection of the ves- while heated by walking, abdomen healthy, except a few sels in the margins of some of the rugar. Splenic region—tubes very healthy. Some of the rugar, side of the neck, the cheek. and extending down into the raxilla. Died by asthenia in axilla. Died by asthenia in croaching on their bases onvoluted. Mid and pyloric region—tubes very much obscured by fibroid formation encoughing on their bases. Pyloric region—tubes very much obscured by fibroid formation in the tubes. Mid and pyloric region—tubes very much obscured by fibroid formation in the farrows than elsewhere, and the tubes in the same parts are shortened.
Post-mortem Examination.	General anasarca; much serous effusion in left pleura, compress-region—nucous membrane ing left lung, which was healthy, thinned; tubes very much as well as the right; a small peri-prodigious amount of fibr- cardial patch. Heart's cavities sub-tubular tissue and ca all dilated; left ventricle hyper-all full of elongated an trophied. Considerable calcar-nuclei. Mid region—tube ous deposit in nitral valve. Much completely broken up; the fuid in peritoneaun. Liver small; with melanie granules. It is capsule contracted in many as in splenic region. Pylon parts. Spleen small; firm; cap-tolerably healthy, involved sule opaque. Kidneys congested; thickening; lower ends ra firm; capsules adherent, surfaces and epithelium fatty. granular and cysted. mucous tissue not indur-	Lungs rather engorged posteriorly; other viscera of chest and abdomen healthy, except a few eysts on the kidneys.
History.—Discase fatal.		
Sex.	N.	N.
Age. Sex.	63	10 T
Name.	Chas. Hawell.	G. Morrison
10	ල. ව	98

refl out of a 3-story Body well formed; old cica. Reaction acid. No trace of congestion. window which she was trices on legs. Blood effused Slight mammillation in cardiac and pyloric cleaning. Enormous effusion beneath the arachnoid and in regions. Splenic region—tubes very healthy, of blood under scapp; perfect its cavity. Inferior part of right-lepthlelium fatty. Mid region—tubes show unconsciousness; pupils im-hemisphere much bruised on sur-a tendency to disintegrate, nuclear deposits and face. Cranium fractured; bones and fibroid thickening at their bases. Pylical the same night. See Sank and face. Lungs greatly loric region—tubes healthy. Congested. Anterior part of spleen slightly bruised. Viscera other-	M. Admitted with dropsy of 3 weeks' standing. Had rheumatic fever 12 years ago; no palpitation since. Complexion pale and waxy. Urine smoky; highly albuminous. Had pain in back. The dropsy increased, and he died in about 7 weeks.	F. Was quite well until 3 months ago; since when her feet and legs began to swell, and were so 14 days. Pain and palpitation occurred after anasarca had ceased. Much loss of flesh; appetite good. Loud systolic mitral bruit. Cough and bloody mueous expectoration. She improved a good deal, but in about 6 we This subsided in great meas admission. Unite was very
	27	13
E. Wilkins.	R. Anber.	E. A. Smith.
To	32	es es

Condition of Stomach.	well and strong 3 months anasarcous. Very numerous mi-pyloric regions. Splenic region contained ago. Has latterly felt weak, liary tubercles in lungs. Bron-numerous small ulcers, the size of a pin's and out of health. Much chial glands tuberculous. Hearthead. No marked injection anywhere, pain in abdomen. Bowels healthy. Peritoneum thickened; Splenic region—tubes tolerably healthy, relaxed; night sweats; cough scrofulous deposit in it, and in but the continuity of their line was often dry. Abdomen bard, tense, amentum and nesentire glands interrupted, either by complete excavations tender. Signs of softening Intestines vascular and adheren or by wasting of the tubes on their free or tubercle in the apices of to each other by means of scrofu-their deep ends. There were nuclear definites. Appetite bad; slept lons deposit. Aucous lining of posits in the sub-tubular tissue and in the badly. Sank gradually. Some small tubercles in kidneys hearly the same state; a cyst was seen in one and spleen. Receipm—tubes much obscured by fibroid regions and proposit at the free surface. Pyloric regions former miners. The mid and pylorie regions former miners.	
Post-mortem Examination.	Body canacisted; extremities anasarcous. Very numerous miliary tubercles in lungs. Bronchial glands tuberculous. Heart healthy. Peritoneaum thickened; serofulous deposit in it, and in omentum and mescuteric glands. Intestines vascular and adherem to each other by means of serofulous deposit. Alucous lining of ileum at lower part ulcerated. Some small tubercles in kidneys and spleen.	Body well made; general Morons and lated; lined lower parts softened; right pleura Splenic reglamost full of yellow fluid. Old Mid region pericardial adhesions, and local black pigues thickening of visceral layer. Both a cyst seen by evertricles of heart greatly dilated, region—tube and rigidatis margin. Aortic valves in mid-region abnormally thin. Much fluid in granulous meritonacum. Kidneys very dark, cell particles wery dark, mutung appearance, spliced dark and very firm, with an opaque, hardened capsule.
II.storyDisease fatal.	llas lost much flesh; was well and strong 3 months a ago. Has latterly felt weak, li and out of health. Much chain in abdomen. Bowels helaced; night sweats; cough of the conder. Signs of softening funbercle in the apices of the lings. Appetite bad; slept lobadly. Sank gradually.	Admitted moribund; having suffered for some time from cough and dyspuces, with general ansarea of lower linbs for about 10 weeks.
Sex	. F	CL.
Age. Sex.	16	10
Name.	L. Famin.	G. Clark.
N.	e e	56

MOOOD MINIDA	
spinal curvature; suffering considerable anterior posterior lined by a layer of dark chocolate-coloured severely from dyspucza, with curvature. Both hugs very em-mneus in its splenic half, and by a paler cougli and difficult expecto-physanatous in front; bronchl mucus in pyloric half. Reaction highly acid ration. Chest full and reso-cougested, and loaded with muco-Splenic region—mneous membrane thin; nant; ribs not moved in in-pus. Heart large; valves tolerably dark-stained, semi-translucent, and soft; spiration; loud, prolonged ex-healthy. Kidneys congested in the secretary hondin. Was much other viscera healthy. Self-digestion. Mid region—tubes healthy, necleived by copious cupping: hut in a few days the dysphore day had been caveled to be an entired by acid. Pyloric region—tubes healthy, unaltered. Admitted with pretty self-digestion membrane slightly injected; were hæmoptysis of 1 week's and vonicæ; a large cavity in the lined with yellowish mucons fluid; acid duration. Had had before left apex was lined by a smooth lubes quite healthy in all three regions;	similar, but less severe at membrane. Muco-purulent fluid pithelium rather fatty in splenie; some Interests. Had laud couglia a long in bronchi. White pericardial ren-tubular and sub-tubular nuclear formation and very weak. Sputa be-viscera also. came in 9 days purulent and free from blood. There were signs of tubercular disease at both apices. He took meat at live, but afterwards his apperite failed. He sank and died in 6 weeks after admission. A dark-haired, robust, much hypostatic congestion in weeks after admission. A dark-haired, robust, and lare to footh lungs; they in splenic region. The tubes of this part are nuclear dependent on hyperineal in-all the other viscera. Surface smooth; pale. Some congestion in splenic region. The tubes of this part stricture, for which he was were otherwise healthy, as well as are very tolerably healthy, but aftered by self-digestion. Mid region—tubes indiscrible in the other viscera. A dark-haired, robust, meet of both lungs; they in splenic region. The tubes of this part stricture, for which he was were otherwise healthy, as well as are very tolerably healthy, but aftered by self-digestion. Mid region—tubes indiscribed by soft and diffuse cellular inflain-from diffuse cell
erior posterior li tungs very em- tront; bronclun ded with nucc-S valves tolerably d ys congested; tr iy. b samed tubercles ge cavity in the li ed by a smooth I	purulent fluid te pericardial hy, abdominal congestion in lungs; they thy, as well as
No disease of very and very training the viscera healthy. Both lungs could be also and very and very also and very and very and very a large than the viscera healthy.	nembrane. Muc n bronchi. W gatches, Heart hea issera also. Much hypostatic nack part of bot were otherwise hea ull the other viscen
Ite had an apparently old No disease of verte spinal curvature; suffering considerable anterio severely from dyspuza, with curvature. Both luncation. Chest full and reso-physematous in from ant; ribs not moved in in-pus. Heart large; val spiration; loud, prolonged ex-healthy. Kithneys pratory rhouch. Was much other viscera healthy, neighber in a few days the dyspunca returned and he died. Admitted with pretty se. Both lungs contain Admitted with pretty se. Both lungs contain duration. Had had before left apex was lined.	similar, but less severe at membrane. Muco-puralent fluid epithelium rath tacks. Had had cough a long in bronchi. White pericardial ter-tubular and time, was much emaciated patches. Heat healthy, abdominal tion in pyloric and very weak. Sputa be viscera also. came in 9 days purulent and free from blood. There were signs of tuberoular disease at both apices. He took meat at the first, but afterwards his apperite first, but afterwards his apperite admission. A dark-haired, robust, A dark-haired, robust. Much hypostatic congestion in Surface smoon ansendar man; not fat. Had back part of both lungs; they in splenic registricture, for which he was were otherwise healthy, as well as are very tolers stricture, for which he was were otherwise healthy, as well as are very tolers stricture, for which he was were otherwise healthy, as well as are very tolers stricture, for which he was were otherwise healthy, as well as are very tolers operated on hy perineal in-all the other viscera. From diffuse cellular inflamdarion and slight peritonitis. Which patch approach a long in the pritonitis.
IIe h spinal severely cough a ration. nant; r spiration piratory relieved but in nea ret Admi vere han doration	
M. N.	M.
30	2 4 2 2
36 H. Jacobs.	J. White.
37 37	80

1	Vomo	100	1-	Trickous Discool Catal	Dock wondow December	Constitution of Channell
	Name.	118c.	Sex.	Illslory. Discase latal.	Fost-mortem Examination.	Condition of Stomach.
J. 6	J. Goodacre.	£.	, i	III 4 months with catarrh, and a sediment in his urine; t pain in passing water, and in pain in back. Has not lived hard. Urine contained much labumen and pus, He wast	Heart healthy. Lungs full of nhercles and cavities. Liver and testines appeared healthy. Long ands of adhesion between the left obe of the liver and the colon, and the opposite wall of the abdomen.	destroying the involved tubes; in some parts the whole tubular tissue is completely pervaded by the nuclear deposit, and the tubes quite atrophied. Pyloric region—aspect uneven; tubes completely atrophied, black, wasted, and imbedded in a mass of fibroid tissue; basement membrane quite lost. Ill 4 months with catarrh, Heart healthy. Lungs full of Mucous surface pale throughout. Splenic and a sediment in his urine; tubercles and cavities. Liver and region—tubes tolerably healthy, but in some pain in passing water, and intestines appeared healthy. Long measure altered by self-digestion. Mid pain in back. Has not lived bands of adhesion between the left region—tubes tolerably healthy, thu obscured hard. Urine contained much lobe of the liver and the colon, and by intestitial fibroid formation. Pyloric albumen and pus. He was the opposite wall of the abdomen, region—tubes very much wasted, scarce seen
Hi	J, Haylis,	3	Ä		Left Kindey Tradice by suppurating scrofulous deposits; some deposits of same kind in cortex of right. Scrofulous ulceration of left ureter. Miliary tubercles and extensive ulceration of the bladder. Much emaciation. Lower limbs cedematous. Lungs cadematous, otherwise healthy. Peritoneum opaque and thickened. Several large cysts in left kidney; right not of healthy appearance. Liver hard, thickened, and contracted. Old adhesions and induration round liver and spleen. Two or three sloughy fistulous openings in skin of epigastrium led to and opened into a large sloughy.	satisfactory account of him-scrofulous deposits; some deposits formation pervading the mucous tissue. self. Scrofulous ulceration of left ureter. Milary tubercles and extensive ulceration of the mucous membrane of the bladder. Much emaciation. Coachman, Injured his left Lower limbs cedematous. Lungs side 12 months ago; abseess cedematous, otherwise healthy. Pc-discolored; pyloric third occupied by formed ocstal cartilages at end of 65 reveral large exysts in left kidney; a sloughing surface covered with funmonths. He lost appetite; right not of healthy appearance; gous growths. Splenic region—tubes had much hinder. In 5 weeks tracted. Old adhesions and in-and encroached upon by fibroid formation. he returned to work, but duration round liver and splen. Mil region—tubes quite gone; tissue thoat another absects formed. On Two or three sloughy fishlous coughly infiltrated with nuclei and granular admission there was a hard, openings in skin of epigastrium led matter, fatty here and there. Some in the

MCCOCS MEMBERNE OF	THE STOMACH.
lages of false ribs and region of stomach, and 2 external fistulous openings. Appetite bad; can take no meat; has flatulence. A fecal smell was perceived from the ulcerated part. He sank, and died in about I month. Died, apparently from asthenia after scarlatina; weeks. Wrine highly albuminous. Some diarrhoxa occurred, and bed-sores formed.	dilated. 6 or 7 weeks before his Body in tolerably good condi- admission he had arrived from tion. Some fluid and fibrinous contained a quantity of acid reddish fluid. Egypt; had good health while exudation in pericardium; white Splenic region—mucous membrane exceedatorad, except that on two patch on health, thich was healthy, high softened, quite translucent; tubes occasions he had attacks of Left lung cadematous; right com-visible, but appearing as if half dissolved pain and gnawing sensations pressed by copious pleural effu- and reduced to faint shadowy streaks, conta e pigastrium, with diarrhea. Some red fluid in peritoneum, seem diminished; no other trace of discase, before admitted with cough, Liver very large and adherent to Mid-region—tubes quite healthy. Pytorie respectoration, pain in right diaphragm; it contained numerous gion—tubes suit healthy, but show side, and short breath; was masses of fibrine in various stages some tendency to disintegrate; and there is side, and short breath; were of softening; some of them were some nuclear and fibroidformation encroachfive irregular crepitations very large; one in the right lobe ing on their bases, sometimes considerably.
r.	.X.
9	54
41 Caroline Austen.	II. Newt.
#	45

Post-mortem Examination. Condition of Stomach.	a large quantity of thick pus, extensively ulcerated. Spleen frias from a cavity, was very able Kidneys rather large, with oney, and the soon sank. Admitted December 7th, General anasarea. Left lung Rugæ strongly marked. Cavity quite having suffered from pal-compressed by copious pleural ex-empty. Whole surface throughout of a plutation and dyspnæa since ulation; a largish patch of thick-dark deep red, with only a little alkaline plutation and dyspnæa since ulation; a largish patch of thick-dark deep red, with only a little alkaline opervious illness; his symp- lung emphysematous, and some ex-Splenic region tubes healtly. Same in mid toms had come on quite gra-travasation in it. Heart very large; and pyloric. The capillaries were most hase of heart, which was en-cular walls somewhat thickered; in every part, forming a fine plexus with larged, and its action in-Valves natural, except some slight very clougated meshes surrounding the tubes, creased. Urine scanty, loaded, thickening of the mitral. Com-Those at the mucous surface were much albuminous. Breathing soon menement of a norta exceedurgly longer, and more highly congested than the hearm every laboured. He thickened and indrarded by ea-l'ertical intertubular capillaries; there were died in I week. Little revery large, congested, its them, just beneath the basement membrane, earest or under a capeanic micher pyramides. Spleen congested, place, the congested liver. Alle very died grave, some horny deposits blood from the eongested liver. In their pyramides. Blood gene-	Is well in summer; has Body well formed; of healthy Splenie region—tubes extremely obseured winter cough last four years, aspect. Jaungs do not collapse; by interstitial nuclear and fibroid formation; Gets no sleep; no appetite, very emphysematous, in some parts nuclear formations also in sub-tubular tissue; Face and lips congested; cedematons; lining membrane of in some parts the tubes are exceedingly breathing hurried. Signs in bronchial tubes not congested; in wasted, and their place occupied by massy
HistoryDisease fatal.	throughout both lungs. In a large quantity of thick pus, as from a cavity; was very low, and had diarrhea, which having suffered from palphation and dyspnea since June; never had rheumatism; no previous illness; his symptoms had come on quite gradually. A double bruit a base of heart, which was enlarged, and its action increased. Urine scanty, loaded, albuminous. Breathing soon became very laboured. He	Is well in summer; has Bord, winter cough last four years, aspect. Gets no sleep; no appetite, very em Pace and lips congested; celeural breathing hurried. Signs in bronchi
Sex.	Z.	24
Age. Sex.	6#	27
Name.	D. Clayton.	M. Burne.
No.	6	1

lungs of capillary bronchitis, some parts the lung tissue was in and extensive nuclear formations. Mid and of some consolidation, some degree solidified. Several region—tubes nucle wasted, though still discharge increased, and she consider and cernable; they are seen degenerating fattily died in 24 hours. Mitral orifice is irregular, and its which is deposited here and there at the arricular surface is covered by a basis also of the tubes. Basement mening of granulations; the posteror brane absent. Pyloric region—tubes infing is thickened, the auterior much volved in abundant fibroid and nuclear forshortened; other valves healthy, mation, which has thickened the sub-tubular Seven large margins of lobnics issue also; tubes manifestly degenerating fiftry. Kidneys hard and con-Stomach contracted in middle; injected gested.	Footman.—Has had good A fine well made person. Upper Mucous membrane lined internally with health in general. Had an lobe of left lung softened so a grayish tenacious anneous. Mid region much attack "on lungs" 9 years to break down readily, containing injected with blood; black spots here and ago; is subject to relaxed puriform matter. The other lobers there. Splenic region—tubes in general bowels. Skin cold; pulse of this lung and the whole of the tolerably healthy, but more or less wasted at rather week, quick; dyspuca right were bighly gorged with their lower parts. Mid region—tubes healthy; urgent; face dusky. Has bloody serum, and exhibited every-surface covered by tenacions mucous conspit up dark-coloured blood where patches of dark congestion. Itaning orange pigment masses. Pyloric last key hours, Signs of con-Blood dark and fluit. Call-bladder region covered by similar nucues; tubes solidation in left front. He full of calculi. Other organs extremely obsenred by interstitial nuclear, sank, and died rapidly. Realthy. Solue separate nuclear masses encroached on the loss affected. Solue separate nuclear masses encroached on the loss.	Admitted emaciated, ex- body in good condition. A tremely depressed, suffering large strumous abseess extending long from cough, and confined all over left elbow, not into joint. to bed with increasing weak- Some emphysema and a few tu- ness. Pulse quiek; skin hereles in the upper part of right dusky; appetite good; tooklung. Some in left. Mucous
	<u></u>	N.
	35	36
	S. Howlett.	W. Barrett.
	7.3	46

Condition of Stomach.	meat and wine. Sputa purn-membrane of bronchi nucch in. affected as those of splenic. Pyloric region—lent and nummulated. He flamed and loaded with muco-pus. tubes much wasted and obscured by intercontinued weak and low, with Strumous deposit in supra-renal stitual nuclear and fibroid deposit; some bectic. Sank in 10 days. Other organs tolerably defined nuclear masses existed in the sub-healthy. Admitted moribund, having Body in good condition. Tuber-Reaction highly acid. Organ empty (as suffered some time with cough cless and vomicæ in both lungs, received). Mucous surface pale, manmilland expectoration, with numerous pleural adhesions, lated in the mid-region. In all the splenic, of ulceration in execum; tubercles gion, the mucous membrane was in a very in sub-nucous tissue of ileum. great degree destroyed by solf-digestion, and Liver, spleen, and kidneys healthy; the blood in the vessels changed to a dark-lorance in the unallered lorance in the unallered.	Was ill only one week with Body in good condition. Both Reaction in nopart acid. Mid and splenic catarrh and pain at lower lungs much congested, at back part regions were tolerably healthy. Part of chest. Had pyrexia particularly, where there were lenacious nighty congested, and covered with part of chest. Mid pyrexia particularly, where there were lenacious nucus containing black matter; and dyspnea, with 5 crepi. small spots of extravasation. Heart pyloric region less congested, also covered tritions at base of both lungs, very large; cavities dilated much; with mucus which contained less black matter consisted of yellow albuminous. Expectoration Liver, spleen, intestines, healthy, pigment. The tubes were very healthy in abundant and frothy, after. Kidneys large, coarse, congested. all the regions; some sub-tubular nuclear deposits coloured blood. He	Body largely made; integuments Aspect of mucous membrane not healthy;
Post-mortem Examination.	membrane of bronchi much inflamed and loaded with muco-pus. Strumous deposit in supra-renal bodies. Other organs tolerably healthy. Body in good condition. Tuber-cles and vomice in both lungs, with numerous pleural adhesions. Heart healthy. Numerous spots of ulceration in execum; tubercles in sub-mucous tissue of ileum. Liver, spleen, and kidneys healthy.	Body in good condition. Both lungs much congested, at back part particularly, where there were small spots of extravasation. Heart very large; cavities dilated much; walls thickened. Valves healthy. Liver, spleen, intestines, healthy. Kidneys large, coarse, congested.	
History.—Discase fatal.	meat and wine. Sputa purn- lent and nummulated. He continued weak and low, with hectic. Sank in 10 days. Admitted moribund, having suffered some time with cough and expectoration, with ema- ciation and increasing debility. He died in about 5 days.	Was ill only one week with catarrh and pain at lower part of chest. Had przexia and dyspnca, with 5 crepitations at base of both lungs. Urine scanty and loaded; not albuminous. Expectoration abundant and frothy, afterwards became tinged with bright-coloured blood. He	book a little antinony, alter-wards calomel and opium, and was emped; but the breathing became more embarrassed, and he died in 1 week. J. Marwood. 49 M. Admitted, having bad cough
Sex.	N.	W.	N.
Age.	30	77	64
Name.	M. Williams.	Jos. Moore.	J. Marwood.
No.	l's op	∞ 	3

and short breath 3 or 4 anasarcous. Lungs rather emphy- it appears mottled and not smooth. Reaction months, dropsy of legs for sematous and cedematous; lowel not acid. An ulcer, the size of a half-crown I week. No previous illness; and posterior part of right partially piece, on posterior wall, at about the junction or rheumatic tendency. Ot-consolidated and softened. Se. for of the splenic and mid regions; it exthopnea. Face pale and puffy. rous and fibrinous effusion in peri- posed the fibres of the muscular coat: close Urine scanty, clear, albu-cardium. Valves of heart dilated, by it was the firm cientiv of some rulerminous. Heart's sound re- and the anterior valve orifices en- On the anterior wall there was a smaller markably weak and distant. larged. There was atheroma in oblong ulcer, which had not penetrated Very little breath-sound in mitral valve, and induration of the deeper than the submucous tissue. Both back, but coarse moist rales, aortic flaps at their base, to a great luters had clean cut, adherent margins. Pericardial friction was de- amount. Peritonitis had taken Splenic region—tubes tolerably healthy; tected after 2 days; and explace to some extent. Kidneys some nuclear masses at their bases, extended cardiac dulness. Same large, and contained one or two fending up among the tubes; capillaries might he had a fit; right am large cysts with from fibrous some incensed; one of these was filled with a solid, atrophied, replaced by nuclear and short large and hierdid and he died in 5 days after flatty matter; surface of one kid-deposit; basement membrane sometimes admission. Inverlange, with rounded margins darkened extensively by black pignent; and slight opacity of capsule: tubes very much observed by intersting was a small empty of cyst in the fattily. The black pignent formed masses right cortical stratum. Increased lying in the superficial stratum of the much and and all slight opacity of clear fully in rerebral course, and all stratums and slight opacity of clear fully in rerebral course.	Suffered 1 year with symphology, though consided. Period in bladder, tonitis with fibrinous and purulent acid. Splenic region—tubes tolerablyhealthy, Urir. occasionally bloody, exudation. A large abscess in but obscured by interstitial nuclear deposit, thick, nuce-purulent, and all-proas liare muscle, but not con. Mid-region in similar state. Pyloric also kaline. Micturition very fre-nected with discased hone. Blad- Basement membrane in the two latter regions could be detected by sound-septum; much induration around
	C. Pearce.
	20

Condition of Stomach.	thin. An abscess formed down to the muscular fibres. An and presented in right iline nicerated opening in the posterior region; it burst of itself; af- partofupper vesicaleavity. Kidneys ter which he sank rapidly, and in a most advanced stage of scrofudied weeks after admission. Ious disease. Other organs healthy. A diminutive percent, suf. B Stomach extremely contracted; ruga very meathy, complete last, months, was fluer were three or four calcarsous in others well migh obliterated by diffused unemplaced and pruritus vulve. A posterior part of right hemisphere, scribed deposits seen occasionally either in the analysis he had a pro-At posterior part of left there was the deeper, or more superficial part of the longed epileptic attack; after a thickened mass of arachnoid, nurcons tissue; in the latter situation they which she sank into coma and with nureh injection round it, and cause depressions, such as exist in the mannerly neced which had caused some from. Pyloric region—tubes healthy, wasting of the convolutions. Brain but obscured by fibraid formation and the sub-tubular tissue. A diminutive properties of elear fluid in percentage and to extending up from the sub-tubular formation interests.	Had had tænia; head en. Body emaciated and pale. Lungs Mucous surface quite pale; reaction acid; arged and square shaped, pro-congested, but crepitant; com-cavity empty. Spleuic, mid, and pytoric ably from some effusion into pressed in some measure by abun-regions all quite healthy; tubes natural, and rentricles. He got an attack of dark fibrinous and purulent exu. their epithelium abundant. Inchied after some days. Was viscera healthy. Brain not exery anæmic.
Post-mortem Examination.	thin. An abscess formed down to the muscular fibres. An and presented in right line ulcerated opening in the posterior region; it burst of itself; af part of upper vesical avity. Kidneys ter which he sank rapidly, and in a most advanced stage of scrotudied weeks after admission. Ious disease. Other organs healthy. A diminutive person, sufference of months from Arachnoid thickened in parts, with fits, in which she was quite some yellow millet seed deposite unconscious. Amenortheca upon it; its vessels congested complete last 7 months. Was There were three or four calcareous anaemic, ill-fed; had the deucor—masses in the arachnoid at the chora and pruritus vulve. Af nosterior part of right hemisphereter 24 days she had a pro-At posterior part of left there was longed epileptic attack; after a thickened mass of arachnoid, which she sank into coma and with much injection round it, and much she sank into coma and with much injection round it, and much dided. Region of the convolutions. Brain natural; rather injected; two or three drachms of clear fluid in ventucles.	Had had trenia; head en. Body enaciated and pale. Lungs arged and square shaped, pro-congested, but crepitant; com-cavity empty. Splenic, rably from some effusion into pressed in some measure by abun-regions all quite healthy; rentricles. Hegget an attack of dant fibrinous and purulent exu. their epithelium abundant, louble pleurisy, of which he dation in both pleure. All the very anæmic. Was viscera healthy. Brain not examined.
History,-Disease fatal.		The Transition of the Color of
Sex.	çi.	N.
Age.	5.2 At	62
Name.	E. Stokes.	F. Harris.
10.	10	51

years ago, when catamenia abdomen and among the viscera. Pylorus; covered with black matter, conbecame irregular. Had then Lungs and heart healthy, except a sisting of epithelial débris, remains of food, pain in head, giddiness and few cretaceons deposits in the yellow pigment masses, and numerous sarsickness; she got better until former. Liver rather granular at cine. Splenic region—tissue altered by 6 months ago, when she had anterior part, elsewhere healthy, self-digestion, but the tubes seem to have a fit; several have occurred Kidneys healthy. A patch of been healthy. Mid region—tibes in some since. Healthy aspect, good inflammatory softening in right parts healthy, in others pervaded by diffused colour. Right side weaker corpus striatum and optic thala-nuclear formation; or presenting among than left, much pain in head, mus: an increased quantity of fluid themselves or at their bases more circumarm became rather rigid; she had several convulsive attacks, eyesight failed, and she died in about 6 weeks after a delimination.	a carbuncle formed on neck. a carbuncle formed on neck. Carpenter. — Relatives Body emaciated, finely made, Mucous surface very dark in the splenic healthy. Has generally had anomic. Right pleura coated with region, and gradually becomes less so togood health. About 4 weeks areolated false membrane, and con- wards the pylorus; it looks uneven, is ago he began to bave pain in taining finid. Left, coated simi- covered near the junction of splenic and back and right side, and soon larly to a less extent, chiefly apon mid regions by yellowish tenacious alkaline well. Abdomen began to the diaphragm. Right lung cade-mucns, containing prisms of triple phosphate. swell. Abdomen tender and matous at back part, somewhat Splenic region—tubes much obscured and distended, appetite bad, pulse congested. Left lung healthy, ex-atrophied by interstitial nuclear and fibroid 105, some cough and mucous cept a few sub-pleural miliary formation, numerous subtubular unclear	expectoration. An indistinct tubercles. Heart, kidneys, liver deposits exist. Mid region—tubes in much tumour was observed in the and spleen, healthy. There was the same state as splenic; pigmentary depoper and left part of abdo-an enormous quantity of scrofulous posits in the mucous and sub-nucous tissue. In markably, nor was there any everywhere, causing all the viscera rated by fibroid formation. Great amount of ascites. The be matted together into one febrile state continued; luclmass. The intestines were ab-
E E	.W	
46	57	
C. Bishop.	J. Chorley:	
XXXVII.	7.Ç	9

Condition of Stomach.	lied about 2 months after other. dunission. Signs of pleurisy and been observed on both ides. His digestion at one incess, who suddenly dropped tissue of abdomen and on heart. at various spots, slightly mammillated in py- flown dead after having tra- One slight white pericardial patch. Ione region. Splenic region—thos tolerably colled 80 miles in a second Lungs healthy, except a little cre- healthy, a notable amount of nuclear forma- class carriage in very severe taccous deposit at the apiecs and lion in the subtubular tissue. Mid region— before. Arcus senilis existed, very large, its valves appeared tubes tolerably healthy. more or less ob- healthy, mirral orface rather di- seured by fibroid formation, their lower ends flated. Walls of left ventricle not convoluted or drawn up into groups.	Ill 5 weeks, had at first Kidneys enlarged, mottled. convulsions and opisthotonos, gorged with bile. sickness. She did not die opnatose. No food was taken for at least 24 bours before	death. Had cough and expecto- looked pleura obliterated. A cretaceous covered in most part of its extent by a ration 8 or 9 months. Bowels pleura obliterated. A cretaceous covered in most part of its extent by a popen. Tongue furred. No sleep, obsolete serotiulous mass, and an icenacious chocolate-coloured mucus, which No appetite. Pulse rapid and empty vomica in upper part of consists of a viscous plasma of faint acid
Post-mortem Examination.	90	interior, our presenting mineralists of complete faty degeneration. Liver, kidneys, and spleen, healthy. Kidneys enlarged, mottled. Lungs and heart healthy. Liver gorged with bile.	Body greatly emaciated. Right pleura obliterated. A cretaceous obsolete scrotulous mass, and an empty vomica in upper part of
HistoryDisease fatal.	708787	fo si a c cr	death. Had cough and expectorations 8 or 9 months. Bowels open. Tongue furred. No sleep. No appetite. Pulse rapid and
Age. Sex.	ž	ŗ.	rei .
.Age.	63	prof	7
Name.	Millen.	C. D.	L. Clarke.
No.	10	\$6	27

rris oly oly oly oly	l on l i i k
feeble. Respiration in both right lung. In left lung at upper reaction, imbedding multitudes of nuclear sides deficient. Suffering part there was also a vomica and corpuscles, some celloid particles, and débris much mental distress from consolidation. White patches and of food. Splenic region—tubes tolerably, death of husband. In spite of streaks on pericardium. Right healthy, epithelium in lower part faity, wine she declined, was very ventricle dilated, and anterior valve Mild region—tubes utterly obscured, if not low and norevous, did not orifice enlarged. Some atheroma in completely atrophied by interstitial nuclear sleep; appetite was quite lost, origin of aorta and in mitral flaps, deposit. Pyloric region—tubes tolerably so that at last she could take Kidneys gorged with blood, cor- healthy, but much obscured hy nuclear and nothing but wine. Died 5 tices mottled and rather fawn fibroid formation. coloured. Some small cysts in broad ligament of uterus. Other very large and outerus. Other viscera healthy.	History of pleurisy 5 weeks Body in good condition. Left Mucons surface pale, covered with pink- before admission. Cough and lung verycedematous. Right pleu- lish, faintly acid mucus. Some mammil- muco-puruleut expectoration. Ral cavity obliterated, all but a lation in mid region about great curvature. Tongue cracked and furred, largish cavity at the upper and Splenic region—tubes very healthy, slight brown. Pulse 100, no sleep; lack part, which was full of puru-trace of nuclear deposits at hase of tubes. Some clearly signs of lent fluid, and lined with rather Mid region—tubes very healthy, but in consolidation appeared in firm, recent fibrine. Upper part some measure obscured by interstitial nuclear lower part of right hing puckered, and con- appeared at night; he became cretaceous and purty-like seroft, upbes tolerably leathty. appeared at night; he became cretaceous and purty-like seroft, upbes tolerably leathty. Appeared at night; he became cretaceous and purty-like seroft, upbes tolerably leathty. Appeared at night; he became cretaceous and purty-like seroft, upbes tolerably leathty. Advisor, breath most lous deposit. Middle and lower from admission. Brandlish-sized abscesses, full of fetid matter; there was no tuber- lowelthy. Kidneys firm, with a yellowish contain. Brandlish contained organise organises of measure pulpy, cap- lowish cortex. Spleen pulpy, cap- sulte thickened. Other organs attural.
ides or ides, a tubes wer pe bobscure pratitia tubes tubes tubes lby nu	Some great c localth health certifing is also yloric yloric localth.
nultitudid partid parti	c, coverage. s very s very solute.
iding reclioine reclioine reclioine reclioine reclioine bes ut phied ric reclioine reclioine obs.	d muc gion a gion a -tubes -tubes bes v secured ation, ar tiss health
imbed splen Splen epithe on—tu Pylon Pylon mation	s surfa mid re egion—egion—ele nuclea sure ol d form btubul
feeble. Respiration in both right lung. In left hung at upper reaction, imbedd sides deficient. Suffering part there was also a vomica and corpuscles, some much mental distress from consolidation. White patches and of food. Splenic death of husband. In spite of streaks on pericardium. Right healthy, epitheli wine she declined, was very ventricle dilated, and anterior valve Mid region—tubbey and nervous, did not orifice-enlarged. Some atheroma in completely arroph sleep; appetite was quite lost, origin of aorta and in mitral flaps. deposit. Pyloric so that at last she could take Kidneys gorged with blood, cor-healthy, but much nothing but wine. Died 5 fitees mottled and rather fawn fibroid formation. weeks after admission. Coloured. Some small cysts in broad ligament of uterus. Other	History of pleurisy 5 weeks Body in good condition. Left Mucous surface pale, cov before admission. Cough and lung verycedematous. Right pleu-ish, faintly acid mucus, muco-purulent expectoration. Fal cavity obliterated, all but a lation in mid region about Tongue cracked and fured, largish cavity at the upper and Splenic region—tubes very brown. Pulse 100, no sleep; lack part, which was full of puru-trace of nuclear deposits a skin hot and dry. Signs of lent fluid, and lined with rather Mid region—tubes very lower part of right side, and of right lung puckered, and com-and fibroid formation, which in right apex. Some delirium fained three or four masses of in the subtubular tissue, appeared at night; the became creteacous and putty-like seroful tubes tolerably healthy. very drowsy, breath most lous deposit. Middle and lower offend matter; there was no tuber-left in 17 days parts of right lung very much conditioned several smallish-sized abscesses, full of fetid matter; there was no tuber-left in their vicinity. Mucous membrane of bronchi inflamed. Heart beathly, kidneys firm, with a yellowish cortex. Spleen pulpy, capsule thickened. Other organs natural.
nd of htt hea nd of htt hea nin con in con ps. delp or hea nin in con in con in con in con in in cer	a lating and lating an
at upplanted at upplanted a ches a ches a ches a lior value eroma eroma ral fla fla fla fla fla fla fla fla fla f	us. Right pleu- theu all but a the upper and as full of puru- ed with rather c. Upper part kered, and con- our masses of tity-like serofu- dile and lower very much con- tained several scesses, full of ewas no tuber- . Mucous mem- ifamed. Heart irm, with a yel- leen pulpy, cap- Other organs
thing a voice patricing danter meath in mit th blc th bis mall	s. Ri ted, a he up he up as full as full or Up ered, a mur try-lik fulle a wery m very
In left as also as also as also as also berica perica; Soid. Soid. Soid a and d and d and one of the form of any.	ood comatou matou blitera ich we did lime fibrine or fo ud pur Mic lung cond 1 abso there inity. chi in.
ung. eere w dation on le dila mlarge of aortic s gorg mottle ed. S ligame healtl	y in g ryocde cavity o cavity art, which and, and three ous a sposit, f right f right f night f right f right right f right right f right right right right right right right right right right right
right lung. In left lung at upper part there was also a vomica and consolidation. White patches and streaks on pericardium. Right ventricle dilated, and anterior valve orifice enlarged. Some atheroma in origin of aorta and in mitral flaps. Kidneys gorged with blood, cor- tices mottled and rather fawn coloured. Some small eysts in broad ligament of uterus. Other viscera healthy.	History of pleurisy 5 weeks Body in good condition. Left before admission. Cough and lung very ædematous. Right pleu- muco-purulent expectoration.—ral cavity obliterated, all but a Tongue cracked and furred, largish eavity at the upper and brown. Pulse 100, no sleep, back part, which was full of puru- skin hot and dry. Signs of lent fluid, and lined with rather consolidation appeared in firm, recent fibrine. Upper part lower part of right side, and of right lung puckered, and con- in right apex. Some delinum tained three or four masses of appeared at night, he became cretaceous and putty-like seroti- very drowsy, breath most lous deposit. Middle and lower offensive. Died in 17 days parts of right lung very much con- densies, and contained several smallish-sized abscesses, full of fetid matter; there was no tuber- cle in their vicinity. Mucous mem- brane of bronchi inflamed. Heart beathly, Kidneys firm, with a yel- lowish cortex. Spleen pully, cap- sule thickened. Other organs natural.
from cite of strong lering leron cite of strong very very very volume not contrake leake leake 1 take leake 1 take leake 3 teake leake l	veeks n and l trical, licep; l n of ll in of ll in of ll came c most l days I f f f f f f f f f f f f f
Sufficiency Sufficiency In sp I, was did squite could e. Di sion.	Cough free from the free from the free from the free free free free free free free fr
ides Respiration in sides deficient. Su much mental distress death of husband. In swine she declined, wa man hervous, di sleep; appetite was qui so that at last she coul nothing but wine. I weeks after admission.	ssion. ssion. scale display of right x. Son night; brief brief idon.
defice defice ment of hus she de appet is appet it at la	History of ple before admission muco-purulent muco-purulent brown. Pulse I skin hot and c consolidation lower part of r in right apex. I appeared at nig wery drowsy, offensive. Diec from admission.
feeble sides much death wine low seeps seep so the nothin weeks	His before muco- Tongi brown skin conso lower in rig appea very offens from a
	N.
	126
	reatc.
	Thos. Sheate.
	80

Condition of Stomach.	Systolic mitral murmur; Gray thin hair; universal jaun- liver cularged; pain referred dice; anasarca of legs; much yel-dark, almost black in spots; it contained a to it; effusion into both low fluid in peritonæum; heart large quantity of whitish chynne, highly acid, pieures; some dropsy. After very large; yalves health; a white Splenic region—tubes almost utterly broken having suffered from the cf-patch on surface; some opaque up, and reduced to a mass of nuclei and fects of these conditions, he thickening of endocardium of left granular globules, mingled throughout with improved and was discharged; ventricle; lower lobe of left lung black pigment globules. Mid region—tubes hut after 14 months, dropsy much compressed by abundant in avery great measure broken up, and their came on again, and dyspuca, pleural effusion; upper pretty-place occupied by diffused unclei and celloid Heart's action was irregular; healthy; right lung everywhere substance; the basement membrane, how- pulse weak; veins of neck adherent by old attachments to ever, was often distinct in this and the distended; urine deep co-walls of chest, except below and splemicregion. Pyloric region—villi beauti- loured and clear. He died dherent by one applied yilly distinct, with their basement mem- gested, upper loop softened; cap-hane, but tubes utterly obscured, if not not substant a dead and general and diffused renchyma dense, and yellow, and nuclear deposits. There was no pigment in him. Kidneys scened tolerably this part.	For 3 weeks had pain and Lungs contained numerous swelling in outer side of left small secondary deposits in an adark acid fluid. Splenic region—nucous thigh, which obliged him to early stage; liver very fatty; heart membrane rather thin; tules have a decided teaver. Health has been membrane of knee-joint inflamed, clear deposits encroaching on tubes. Mid generally good, but has not with purulent fibrinous exudation region—tubes generally healthy; they are had substantial food last year; extending to it along the perios-shortened and obscured in some spots, cornives in a bad, dirty neight cum of the femur from the sea responding to mammillating depressions. Dourhood. Abscess was of the abscess. Pyloric region—tubes tolerably healthy, but much appened, but diffuse inflammation which spread to mation, which involves also the corium.
Post-mortem Examination.	Gray thin hair; universal jaundow, annowed dice; anasarca of legs; much yeldark, almo low fluid in peritoneum; heardlarge quanvery large; valves healthy; awhite Splenie repatch on surface; some opaque up, and rthickening of endocardium of left granular grentricle; lower lobe of left lung black pign much compressed by abundant in avery guleural effusion; upper pretty place occur healthy; right lung everywhere substance adherent by old attachments to ever, was walls of chest, except below and splenier guleurind, compressed, highly confully distingested, upper lobe softened; cap brance, but suic of liver much thickened; pa-obliterated renchyma dense, seened tolerably this part, hand were madel tolerably this part.	Tangs contained num small secondary deposits i early stage; liver very fatty; and kidneys healthy; syr membrane of knee-joint infa with purulent fibrinous exud extending to it along the p teenn of the femur from the of the abscess.
HistoryDisease fatal.		
Age. Sex.	ii.	×
Age.	က္	rent work
Name.	J. Greenfield.	W. Hopkins.
No.	69	09

,	100
Aspect tolerably healthy; not anaemic. Dysphagia 4 mour on the left side of the neck, much depressed, contracted in the middle; months; a mass of enlarged pressing on the cosphagus, and contained much turbid, dirty yellow, acid glands on left side of neck; causing uderation of the upperfluid. Surface palish. Splenic region— much mucous matter rejected, third of this caual, and of the upperfluid. Surface palish. Splenic region— in which were seen numerons footis, and parts around. The tegrate, with considerable subtubular nuclear large cells, opaque with oil middle of the exophagus, for about deposits, encroaching sometimes on the molecules, apparently from 2 inches, was not more than 3 inch thuses. Mid region—tubes healthy, but partly one trial). Always delicate, appears natural, but is choked upolscured by large nuclear deposits occupying Digestion pretty good until by a thick schaecous matter, con—the substances of the mucous membrane, as last 12 months; during that isting of altered epithelium, well as diffused more uniformly between and time very bad is beef-trac canses Heart, kitherys, and liver healthy; among the tubes. Bloody fluid was brought up; cles, with a small cavity in apex. She become less and less able to swallow, and died 6 weeks after admission, greatly de- hiliared. Admitted in a state of in- Swallow, and died 6 weeks after admission, greatly de- hiliared. Admitted in a state of in- Swallow, such died 6 weeks after admission, greatly de- hiliared. Admitted in a state of in- Swallow, such died 6 weeks after admission, greatly de- hiliared. Admitted in a state of in- swallow, and died 6 weeks after admission, greatly de- hiliared. Admitted in a state of in- swallow, and died 6 weeks after admission, greatly de- hiliared. Admitted in a state of in- swallow, and died 6 weeks after admission, greatly de- hiliared. Body emaeiated; angular dors, but kird; junction with the mid, there is an aleer with insensible. Died next day. neys granular; a clot of blood and smooth, thinned epity broads	In early life a jockey, lat- cerly a nurse. Has been ope- rated on for fistula in ano;
स <u>ं</u>	N.
29	52
C. Gillmore.	R. Nelson.
. 62	3

0	Name.	Age.	Sex.	History.—Disease fatal.	Post-mortem Examination.	Condition of Stomach.
·9	M. Jones.	25	a.	last 9 weeks had had bleed-part, ing from anus; cough, expec-healthy toration, diarrhoza, and cma-mucons ciation about 3 months; feeted sigus of mischief in left cheest, slaty curine not albuminous; diar-much rhuza came on; he sank and ulceratidied in a few days after ad-seesses, mission. Ilousemaid. Has gene-Body rally had very good health left luu III 11 days. A mottled rash cned, a on chest; abdomen tympa-right 1	art, fatty, and pale; heart nealthy; kidneys highly granular; nucous membrane of rectum aftered by old inflammation of dark laty colour; sub-nucous tissue nuch thickned, some spots of lecration, and some minute abcesses. Body well made. Lower lobe of it lung highly congested, softned, and containing little air; ight lung in nearly same state	last 9 weeks had had bleed, part, fatty, and pale; heart times completely, their place occupied by ing from anus; cough, expechealthy; kidneys highly granular; nuclear and fibroid deposit. Mid region-toration, diarrhox, and ema-mucous membrane of rectum af unbes very much atrophied by diffused nucleation about 3 months; feeted by old inflammation of dark elear and fibroid formation, with large nuclearities of mischief in left chest, fair, much thickened, some spots of the tubes. Pyloric region—tubes very much, rhea came on; he sank and ulceration, and some minute ab-almost entirely, arrophied by intestitian died in a few days after ad-seesses. Ilousemaid. Has gene-Body well made. Lower lobe of Surface covered with reddish non-acid rally had very good health left lung highly congested, soft-fluid cavity nearly empty. Splenie region II 11 days. A mottled rash ened, and containing little air; much injected; tubes in some parts tolerably on chest; abdomen tympa-right lung in nearly same state healthy, in others much obseured or even
65	W. Golding.	17	N.	nuce and raner render; urine abluminous; it continued so throughout until her death, about 10 days after admission. Recent inguinal hernia; operation; signs of peritonitis; vomiting; death. Vomites; vomiting acid.	behind; heart and liver liealthy; kidneys hard, but healthy in appearance; 3 alcerated patches of Pyer's gland in ileum; rest of canal healthy. Body rather decomposed; traces of peritonitis; adhesions and puriform matter round intestines. Heart, liver, and kidneys healthy; both lungs very much engorged at back parts. A portion of ileum, I inch long, was dead and sloughy; the part above the stricture was highly congested.	abbuminous; it continued solviduegs hard that has the solution of solutions and intervening nuabbuminous; it continued solviduegs hard hat healthy in appearance; 3 alcenated patches of there are nuclear masses in the midst of the about 10 days after admission. Pyer's gland in ileum; rest of tubes. Midregion—tubes very healthy, hat canal healthy. Recent inguinal hernia; Body rather decomposed; traces of perito- of peritonitis; adhesions and pugramous, searcely acid fluid; in this were nitis; vomiting; death. Vo-riform matter round intestines, numerous masses of dark yellow matter. Heart, liver, and kidneys healthy; Splenic region—tubes tolerably healthy, both lungs very nucle engorged some nuclear masses encroaching on bases at back parts. A portion of ileum, of tubes. Mid region—tubes in some parts I inch long, was dead and slough; very healthy, in others invaded by fibroid the part above the stricture was formation, extending nywards from the highly congested. Pyloric region—tubes and isough; termines in the part above the stricture was formation, extending nywards from the highly congested.

Thomas facon. 41 M. Ill 8 months, with symp- body much emaciated. Liver Surface pale, covered with tenacious non-toms of pulmonary puthisis, and kidneys pale, but healthy. Paloric region—tubes very healthy. Pyloric region—tubes very healthy. Pyloric region—tubes all the signs of large cavities in the lungs. The lungs of large cavities in the lungs. Special of the converse of the conventions in the sub-tubular tissue and corium. Lower large nuclear formations in the sub-tubular tissue and corium. Lower large hunches of convolutions. Some parts much more affected than others.	A servant, single. — Had Lungs highly cedematous, consuffered with symptoms of gested; a little old tubercle at abundant in pyloric region; the mucus conbronchitis 17 days, had simi-apices, general adhesious of both tains numerous sarchine. Splennic and mid lar attacks before. Incr. Liver, kidneys, and regions—tubes very healthy. Pyloric region spleen, healthy. Anterior edge of —tubes not healthy, their lower parts confirer rounded, somewhat; surface voluted, observed by interstitial nuclear and of capsule thickened, and adherent fibroid formation. to diaphragm. Body rather thin	Beforehisadmission bruised Body in good condition, mushis chest severely by a fall, cular. A large quantity of turbid, marbled aspect about lesser curvature; a which caused much extraval dirty greenish sero-purulent fluid kidney-shaped uleer on posterior wall near sation of blood over the right in right pleural exwity, both layers the lesser curvature, and several dark red ribs. He had suffered from coated with recent lymph. Ribs spots in its vicinity. Reaction feely acid. cough and pain in that side not injured. Both lungs quite Splenic region—tubes seem to be tending to a long time, was exceedingly healthy. Heart rather large, but disintegrate. Mid region—tubes indistinct, weak, and had ruined his healthy. All the abdominal visceral but epithelium abundant; there are some leadth by drinking. He looked healthy. It is same state. It is a same state. It is same state.
ted.	iatous tubercons of idney rior equal; sufficient additional additi	lition, y of t rulent both mph. lungs r larg ninal v
macia but h	old dhesic ver, k Anter mewb ned, ar	cond uantiti ro-pu avity, ant ly oth rathe labdon
pale,	ghly little eral a sart, li thy. thy. ed, so liieked im.	good rige q ish se ish se ural c l. By Heart II the
dneys	l; a ', gen ', gen ', heal ', heal round sule t	A la
Bod and ki	Lur gested apiees pleura spleen liver of cap to dia and pa	Boc cular. dirty in rigl coated not il health health
Ill 8 months, with symptons of pulmonary phthisis. and kidneys pale, but healthy. Anæmic aspect. There were all the signs of large cavities in the lungs.	ns of g	Before his admission bruised bddy his chest severely by a fall, cular, which caused much extrava-dirty grastion of blood over the right in right ribs. He had suffered from caated rough and pain in that side not inja a long time, was exceedingly healthy, weak, and had ruined his healthy health by drinking. He looked healthy, health by drinking. He looked healthy, lead hy sans older than he said he was. A small venesection relieved his dyspnoga much, but he soon sank into a state of prostration, in which he sunk.
with nry ph There rrge e	igle. – imptor s, had	ssionby y by lich extended in the single exceed runner. The line in the single exceed in the single exceed in the single exceed in the single exceeding a much he ich he i
nths, lmons lmons sect.	t, sin th sy 7 day efore.	admis evereli ood ov ood ov nad su pain , was had inking ler thi eler thi dl ven ink int
8 mood of puic aspectable signal lungs	d wi nitis I acks t	orehis est se causs of blc HIC HIC Hand and time, and by dr rys old A sma his d his d
Ill 8 mon toms of pul Anæmic aspe all the signs in the lungs.	A servant, sing suffered with syn bronchitis 17 days lar attacks before.	Befahis chhis chhis chhis chhis chhis chins chilbs. cough a long weak, weak, health he
N.	4	M.
14	34	4 8
Thomas Bacon.	A. Felby.	J. Oates.
99	29	84

Condition of Stomach.	A nurse in Marylebone In- Limbs spare. Much fat on abdo- farmary, died apparently of men and among viscera. Both tained some thin, feebly acid, chocolate bronchitis. duration in anterior edge of right, mucosa membrane appears thinned, tubes Liver healthy, some ehronic thick-excessively wasted, débris remaining here ening of its capsule. Kidneys and there, with fatty contents, and some lightly granular, arrophied to one rather harge eysite formations; these are all half their normal size. Uterus en- imbedded in a dense roof of fibriol tissue, larged, retroverted, its cavity much which is traversed by a great number of enlarged and lined by a bloody yellowish streaks, consisting of oily mole- coagulum. Liming of its cavity men which is traversed by a great number of enlarged and lined by a bloody yellowish streaks, consisting of oily mole- larged, retroverted, its cavity much which is traversed by a great number of enlarged and lined by a bloody yellowish streaks, consisting of oily mole- coagulum. Liming of its cavity men wasted and there are seen groups of convolutions, the remnants of tubes whose outlet is obliterated. Pyloric region—manmillated in some degree, tubes wasted and lower ends gathered into burbone, with much free oil. Here and there are seen groups of convolutions, the remnants of tubes whose outlet is obliterated. Pyloric region—manmillated in some degree, tubes wasted and lower ends gathered into burbones, with much graundar and oily deposit under the basement membrane. There were a few	Married. Suckling I year Great emaciation. Much clear Contained a great deal of acid, semi-fluid and 10 months, is extremely fluid of reddish colour in both matter, like white gooseberry jam. This can attack of acute pain in derably. Lungs, heart, and peri-food, mingled with very numerous fragabdomen, with fever and cardiumhealthy. Peritonzum much ments of columnar epithelial lining of diarrhea. Abdomen enlarg-linickened, opaque, and vascular, flossulæ. There was some fissuring of the ing last 3 weeks, is tense, contained 2 quarts of yellowish surface in the splenic region, but no mann-
Post-mortem Examination.	Limbs spare. Much fat on abdomen and among viscera. Both tulings ædematous and engorged posteriorly a mass of grayish induration in anterior edge of right. Liver healthy, some chronic thickening of its capsule. Kidneys highly granular, atrophied to one half their normal size. Utcrus enial arged, retroverted, its eaving much enlarged and lined by a bloody ocoagulum.	Great emaciation. Much ele fluid of reddish colour in bo pleure, compressing lungs con derably. Lungs, heart, and pe cardiumhealthy. Peritoneum mu hickened, opaque, and vascul, contained 2 quarts of yellowi
History,Disease fatal.		
Sex.	ь:	EL.
Age.	06	96
Name.	- Eash.	E. Hunt.
.00.	69	20

13.2 feeble. Unine searty and existed on the left side, non-ad-but there was some diffused nuclear deposit, loaded. Had searce any ap-herent, it consisted of a lowly and some filtonia product. There he basis of the tubes. Mid region—tubes some relief, but 14 days after was a similar smaller tumour on leathy. Some relief, but 14 days after was a similar smaller tumour on leathy. Pyloric region—tubes more or had much diarrheca, and then the right. Uterus and abdominal less atrophied, with much interstitial nucleonomplaned of violent pain in viscera healthy. Some relief, but 1 week after she was a similar smaller tumour on leathy. Pyloric region—tubes more or had much diarrheca, and then the right. Uterus and abdominal less atrophied, with much interstitial nucleonomplaned of violent pain in viscera healthy. Was tapped again, with some was attacked with voniting of a very large quantity of dark bloody fluid, and died. A cook, subject to writter Body in tolerable condition. Splenic part darkened by acid acting on congh, admitted December Right img consolidated, excavated blood, in some degree self-digsted; some 13th, having had 3 weeks ago in middle and upper parts by manmillation about lessercurvature. Splenic a violent attack of dyspuca, earlying of ensity, and pain a ruleut, and grammous matter. No lay self-digestion; some black pignent grains lower border of right side, tubercless. There were several very in their intersitiess. Mid region—tubes flower border of right side, tubercless. There were several very in their intersities. No lay self-digestion; some black pignent grains lower border of right with muchs. The right pleura was almost oily flowed strong, and much cough, with muchs. The right pleura was almost oily flowed to colonically and weak. Much cough, with muchs. The right pleura was almost oily flowed strong, and and weak. Much cough, with muchs. The right pleure existed much observed, and a grandle should be some attacks of voniting, the centre, where there existed much region—tube and much aft
M. A. Locke.
7.2

101	Name.	Age.	Sex.	History.—Disease fatal.	Post-mortem Examination.	Condition of Stomach.
CI.	- Tucker.	64	W.	Cough and bronchial expectoration during the last winter; hæuroptysis occurred some time ago, and again to a greater amount shortly before death.	peritonitis, with serous and therinous cflusion. Liver and spleen much softened. Kidneys large and glossy. Uterus and appendages matural. Cough and bronchial ex.—Reart healthy. Lungs univectoration during the last versally adherent to walls of cheet; winter; hæmoptysis occurred no tubercles; some masses of informet time ago, and again to duration in various parts; much greater amount shortly be-cadema of pulmonary tissue. Kid-liore death. incys healthy. Liver tolerably health, a patch of thickening on its surface. Spleen small and soft, with surrounding adhesions.	peritonitis, with serous and fibrinous effusion. Liver and spleen much softened. Kidneys large and glossy. Uterus and appendages Cough and bronchial ex. Heart healthy. Lungs unipectoration during the last versally adherent to walls of chest; marked mammillation towards pyloric rewinter; hæmoptysis occurred no tubercles; some masses of ingion; — this part covered with viscid, some time ago, and again to duration in various parts; much glassy, acid mucus. Splenic region—tubes a greater amount shortly be leathly. Liver tolerably inon, dark pigment granules are dispersed health, a patch of thickening on through the tissue. Mid region—tubes its surface. Spleen small and soft, very tolerably healthy. Pyloric region—with surrounding adhesions.
63	- Wiffin.	61	×		llad scarlatina, ulcerated Lungs collapsed at some parts sore throat, and swelled near the borders; rather conglands; he became debilitated, densed at back parts, but still cream kept screaming continu-pitant; traces of bronchitis. Heart, ally till near death. Urine kidneys, spleen, and liver, healthy.	Indonation, ulcerated Lungs collapsed at some parts Cavity empty; reaction very feebly acid. sore throat, and swelled near the borders; rather con-Splenic, mid, and pyloric regions show glands; he became debilitated densed at back parts, but still ere-tubes quite healthy. Some nuclear deposits and kept screaming continu-pitant; traces of bronchitis. Heart, in splenic region at bases of tubes.
7.	- Mills.	63	, x		was albuminous; but there Brain pale and wet. Skin and all was no marked dropsy. He the organs very pale. It took only beef-tea and milk for some days. Was an habitual sufferer Lungs highly emphysematous, from rheumatism; got an at- and cedematous. Bronchi sometek of dyspuces, with symp-what infamed. Heart's musculari tooms resembling those of tissue soft; one aortic flap stiffened acute bronchitis, and simul- by a ridge of bony deposit, the taneous disappearanceof pains other valves healthy. Liver and from the joints. He was blied spleen healthy. Kidneys very	was albuminous; but there Brain pale and wet. Skin and all was no marked dropsy. He the organs very pale. Took only beef-tea and milk for some days. Was an habitual sufferer Longs highly emphysematous, Surface in splenic region caused by fluid from rheumatism; got an at- and cedematous. Bronelii some- of acid reaction, and darkened here and tack of dyspince, with symply-what inflamed. Heart's muscular there by altered blood. Part of the mid and toms resembling those of tissue soft; one aortic flap stiffened of the pyloric regions are quite pale, and acute bronelitis, and simul- by a ridge of bony deposit, the covered by dense non-acid mucus. Splenic anneous disappearance of pains other valves healthy. Liver and region—tubes seem to have been tolerably from the joints. He was bled spleen healthy. Kidneys very healthy, but are much altered by self-

tubes im- tubes im- oid tissue; of being h tenacious i, in all the	sid mucus, da tubular bes appear tural, with r matter in le buried matter, in sells; they muous row.
digestion. Mid region—tubes generally very healthy. Pyloric region—tubes imbedded amid much nucleated fibroid tissue; their lower ends in process of being gathered into branches. Surface quite pale, covered with tenacious non-acid mucus. Tubes healthy, in all the three regions.	Surface pale throughout, covered with a in layer of acid slightly viscid mucus, nataining much columnar and tubular nithelium. Splenic region—tubes appear rophied, wider apart than natural, with uch coarse nuclear and granular matter in eir interstices. Mid region—tubes in ocess of being atrophied; they lie buried aid a mass of nucleated fibroid matter, in hich are seen numerous fat-cells; they in not form a regular continuous row-doric region—tubes in same state, and eir lower parts gathered up into bunches.
digestion. Mid region very healthy. Pyloric bedded amid much nuc their lower ends in gathered into branches. Surface quite pale, co non-acid mucus. Tube three regions.	ace pale thrugher of actioning much ining much ining much ining speed, wider a coarse nuclear uterstices. of being at mass of nut are seen n iregion—tur region—tur region—tur
digestivery he bedded their gather gather Surf non-act three r.	Surf thin la contain epitheli atrophi much o their i process amid a which do not Pyloric their lc
much wasted. much wasted. pleen, kidneys, lower part of soft in bile-tinged is; it was not The large in- xternally than xternally than y membrane of soft is slaty colour, rous spots of con, which in Whole mucons	Left leg in- ened, and eon- purulent and f bloody fluid oth lungs at a very dark, Much creta- me bronchial ery soft and erwhat dilated; ricular orifice ricula
with relief, but afterwards much wasted by large cysts formed digestion. Mid region—tubes impedded amid died. In their substance. In their substance. In I month, with so-called Body pale; very much wasted. Bowels relaxed; Lungs, heart, liver, spleen, kidneys, non-acid mucus. Tubes healthy, in all the all the healthy. The lower part of three regions. In the lower was of a slaty colour, and slimy pale mucus; it was not materially injected. The large interestine was darker externally than natural; the mucous membrane of the execum was of a slaty colour, and presented numerous spots of inflammatory injection, which in the lower part were converted in	Had good health, except a Body well made. Left leg in-thin layer of acid slightly viscid mucus, hydrocele, which had been famed; muscles softened, and con-containing much columnar and tubular cured 2 or 3 years before, faining much semi-purulent and epithelium. Splenic region—tubes appear Without previous ailment, ex-bloody fluid. 3vj of bloody fluid atrophied, wider apart than natural, with cept pain in the back occa- in left pleura. Both lungs at much coarse nuclear and granular matter in sonally, his legs had begun their lower part of a very dark, their interstices. Mid region—tubes in sonally, with red patches on ceous matter in some brouchial amid a mass of nucleated fibroid matter, in cheeks. Pulse quick, regular, glands. Heart very soft and which are seen numerous fat-cells; they rongue pretty clean. No flabby; cavities somewhat dilated; do not form a regular continuous row, evidence of disease in heartright anterior ventricular orifice Pyloric region—tubes in same state, and or hungs. Urine not albu-very large. Endocardium blood-their lower parts gathered up into hunches, minous, but he had all the stained. Aorta atheromatous. Liver
smuch in the in the in the in the ileum ened, and s. mater testin natur the c and pinfle lo to ac to a	tissue Boo flame tainin blood in le their their their theil ceous gland flabby tright very
afterward nd died. h so-callee relaxed	h, except a lad been urs before illment, ex. back occa. back occa. had begun so. Aspec patches or ck, regular ean. Not albu ad all the
with relief, but got worse, sank, an III I month, wit decline. Bowels bilious fluid stools.	ood healt, which or 3 yes previous a previous a n in the his legs and face all with red pretty cl of disease. Urine but he h
with regot wors	Had gydrocel yydrocel 2 uured
Fi.	N.
4 months.	40
M. E. Crawford.	de,
5. Cra	W. Whyles.
10	9

Condition of Stomach.	aspect of a man suffering from soft and greasy. Kidneys rather renal disease. After about granular and flabby, mottled and 14 days, diffuse cellular in-vascular their cortices greati, flanmation came on, unine be-wasted in spots. Spleen soft. eame albuminous and bloody, Other organs matural. There was a cavity in the liver containing matter like the débris of hydatids. M. Suffered 2 years with dy. There was universal cancerous sentery, and latterly had as-infiltration of the sub-peritoneal cious neutral nueus. Splenic and mid cites, the rectum and bladder. Theregion—tubes perfectly healthy. Pyloric the rectum and bladder. Theregion—tubes everywhere indistinct, buried organs were healthy. matter; their lower ends in some spots	Subject to cough for 30 Body ædematous; some scrum Cavity contained a quantity of reddish years, ever since he had in peritoneum; blood generally chocolate-looking alkaline fluid. Mucous measles; spits blood instreaks, fluid. Slight effusion in pericar- nembrane much injected in splenie remininged with yellow thick dinm; a long thin band of adhe- gion;—in the middle it was quite of a sputa; his legs swell; is ston over middle of right ventriele, flark red, in the pyloric of a slaty blackish, essels, which we should large gray. Splenie region — tubes tolerably swollen; eyes prominent, vessels. Right ventriele thickened healthy, but there is a decided formation Urine not albuminous. Had and enlarged. Left of natural of nuclear fibroid matter, extending up from some diarrhoca. Plenral frie, size. Aortic valves—only 2—the corium among the tubes. Mid region was observed in both thickened, their edges hardred—tubes in some parts extremely wasted by backs. He got worse suddenly, and involuted; they were not efficientumscribed and diffused unclear deposits; and died 18 days after admis-cient. Other valves healthy. Right in other parts they are tolerably leafthy, ling everywhere adherent; its and there is only some nuclear fibroid lower lobe gorged with black blood formation at the bases of the tubes, and and serum; does not collapse; is encroaching among them. The intersoft and friable; its bronchial tubular eapillaries are much injected, and
Post-mortem Examination.	aspect of a man suffering from soft and greasy. Kidneys rather renal disease. After about granular and dabby, mottled and 14 days, diffuse cellular in-vascular their cortices greaty, flammation came on, unine be-wasted in spots. Spleen soft. came albuminous and bloody, Other organs natural. There he sank and died. Suffered 2 years with dy. There was universal cancerous sentery, and latterly had as-infiltration of the sub-peritonaal tissue, with a large mass involving the rectum and hadder. The organs were healthy.	Body ædematous; some scrum in peritonæum; blood generally fluid. Slight effusion in periteardium; a long thin band of adhosion over middle of right ventricle, and adhesions also alout large vessels. Right ventriele thickened and enlarged. Left of natural size. Anottic valves—only 2—thickened, their edges hardened and involuted; they were not efficient. Other valves healthy. Right ling everywhere adherent; its lower lobe gorged with hack blood and serim; does not collapse; its soft and friable; its bronehial
History.—Discase fatal.	aspect of a man suffering from renal disease. After about 14 days, diffuse cellular infammation came on, urine became abluminous and bloody, he sank and died. Suffered 2 years with dysentery, and latterly had ascites.	
Sex.		×
Age.	23	7
Лате.	G. 11—.	R. Stratton. 47 M.
0/.	to to	of the state of th

upper lobes emphysematous. Left lung emphysematous; a small tuborcular mass at its apex with puekering round it; otherwise healthy. Kidneys appeared healthy. Liver healthy. Lungs full of tubercles; very large cavity in the left.	A potman,—Admitted un- No arcus senilis. Skin ge- Surface pinkish, smeared over with teconseious, with very con- nerally of a yellow bue. Dura nacious bile-tinged neutral mucus, in which tracted pupils and bemiplegal mater very adherent to bones; were crystals of triple phosphate. Near of right side. Bowels freely vessels much congested. A thin the pyloric region and lesser curvature acted on. He fell down sud-layer of blood in sub-arachnoid there are some spots the size of a small denly and vomited, having, fissue of eerehellum. Cerebral pea, which are incipient ulcreations, infil- it was said, each a hearty arteries slightly atheromatous, trated by hamorrhagic evadation. Splenic dinner on the day he was Central parts of brain much soft-region—tubes very healthy. Mid region— attacked. He is in the habit ened; ventricles much dilated:—tubes very much obseured, and more or less besides gin, &c., daily. Died tained a little. Left corpus stri-atrophied annia a copious infiltration of dutun and optic thalamus—byoken muchecar and granular matter; there are down by extravastion of blood; large nuclear deposits in the deeper layers and also septum lucidum. Traces of of the membrane, containing much oily
ge fa f ph Av Av Ge Ge	mittee very nemit vels i down i, ha i, ha y he y he of po of po
a larg ns of Suff ears. urine 1035.	—Adh ith and H Bov Bov er fell omitec eaten ne da e is in oints
of a npton ars. 2 ye ofgr.	s, w. w. upils side. Ho nd vo said, on the lift, of the lift, w. lift, in, & days
Father of a large family. Had symptoms of phthisis some years. Suffered from diabetes 2 years. Average quantity of urine 24 pints daily; sp. gr. 1035. General anasarca at time of death.	A potman.— conscious, wit tracted pupils a of right side. arted on. He denly and vor it was said, e dinner on the tracked. He of taking 5 pi pesides gin, &c. in 2 or 3 days.
M. III. dù dù da da a an	M. co
45	200
4	
	II. Spillen.
ب د ا	II. Sp
6	08

nation. Condition of Stomach.	an old cicatrix in outer wall of matter. In some sections, the tubes are right ventricle. Lower and poste-almost wholly lost, and their places occurring that of lungs softened and pixed by large nuclear deposits and granular much engorged; some extravasa—and fibroid matter. In the situation of tion in parts. Left valve of heard one of the small ulcers the surface was thickened; slight atheroma of mi, seen to be sunken, the basement membrane trail valve and of avata. Coronary gone, and the tubes quite lost, while some arteries atheromatous. Sight failing since 6 or 7. Head well shaped. Superficial their cortices wasted: much fat around them. Sight failing since 6 or 7. Head well shaped. Superficial spears of age; has had some creebtal veins congested. Brain clynne feebly acid; surface pinkish. In fits, and is half idiotic, other-healthy. No fluid in ventricles, splenic and mid regions—tubes tolerably wise has had good health. Lungs emphysematous and cele, leathly, but the uncous membrane is cannot appear to the some creebtal veins congested. Brain clynne feebly acid; surface pinkish. In after had febrile symptous, transverse colon, distended by the substance of the nuccous membrane out some parts. Heart, liver, and kidneys shortened;—this change on tidled with lower speech failed. It days healthy. Intestines, especially instance with a diffused nuclear deposit in after had febrile symptous, transverse colon, distended by the substance of the nuccous membrane of some days patches of indian. One of the nuccous membrane in that febrile symptous, transverse colon, distended by the substance of the nuccous membrane of swallowing, and collapsed in membrane conflowed by loss of power in flatus; Peyerian patches of indian—congonerate glands; they are filled with lower speech failed and power matory congestion in mecous membrane transplay go, and some large patches of indian—congonerate glands, they are failed with the gestion round them. Some conservative and proper interpretation of the same as a pays. The substance
Post-mortem Examination.	an old cicatrix in outer wall of right ventricle. Lower and posterior part of lungs softened and much engoged; some extravasation in parts. Left valve of heart thickened; slight atheroma of mitral valve and of aorta. Coronary arteries atheromatous. Liver highly scirrhotic. Capsule of spleen opaque; itself firm and hard. Kidneys congested and granular; their cortices wasted: much fat around them. Ilead well shaped. Superficial cerebral veins congested. Brain healthy. No fluid in ventricles. Lungs emphysematous and codematous, and collapsed in some parts. Heart, liver, and kidneys healthy. Intestines, especially fransverse colon, distended by flatus; Peyerian patches of ileum here and there much congested, and some large patches of inflammatory congestion in mucous meansulary glands very distinct; no congestion round them.
History.—Disease fatal.	
Ser.	W.
Age.	L'es junt
Name.	R. Randail.
.No.	₩ 2

	MADELINE OF THE STOMACH.	140
M. Omnibus driver.—Not of Body pale; very robust and Cavity contained much watery and mucous steady habits; not a drunkard, muscular; less anasarcous. Copious fluid, slightly acid. Splenic and mid rebut took spirits daily. Had serous effusion in right, some in gions — tubes healthy. Pyloric region—a somewhat similar attack 16 left pleura. Right lung consoli-tubes tolerably healthy, but showing a years ago; health very good dated to a great extent with solid-tendency to arrophy and to hecome bunched since, except slight winter exudation matter; tissue occlema—at their lower ends. In some parts they catarrh. Voice very weak; tous, softened, easily broken down, were more decidedly wasted. There were much debilitated. Ill 3 weeks, Left lung similarly affected, but to some small sub-tubular nuclear deposits, having relapsed after a pre- a less degree. Upper parts of and more or less of diffused interstitial vious similar attack. Dysp-both most affected. Heart very nuclear and fibroid formation. Duodenum now aurgent; in ocase in any large; two acortic valves shrunk, injected; villi wasted and ragged.	matous. Expectoration scanty Mitral healthy. and dark. Uriue loaded; not softened. Kidneys and liver albuminous. Signs of enhealthy. Signs of enhealthy. Signs of enhealthy. Bed-ridden some months; Body rather wasted and pale. Bed-ridden some months; Browed in a few matous. Healthy, except pale, with a little dotted injection; consymptoms; improved in a few matous. Heart healthy, except pale, with a little dotted injection; condays, so as to be able to take some thinning of walls of right tains some darkish, non-acid fluid. Tubes food well, but soon after ra-valve, and a little thickening of in all three regions tolerably healthy. Some pidly sank. She took \$\frac{7}{3}\$ iv of mitral flates. Kidneys granular; interstitial nuclear and fibroid formation in brandy 2 or 3 days before rather wasted. Liver healthy pyloric. Duodenum healthy. a large sub-serous parch of thickening. Spleen healthy and	M. Ifad epileptoid fits 2 months, Substance of Irain healthy, but and perhaps longer, in which pale; ventricles distended. Lungs region—tubes healthy, but their epithelium he had no convulsions, buthighly exdematous and congested in lower 3ths is remarkably opaque and was simply unconscious; there at back parts. Heart strongly fatty; the fatty opacity ceases when the
0	20	
<u> </u>		
J. Platt.	M. Williams.	J. Carroll.
25.25	82	ä.

No.	Name.		Age.	Sex.		Post-mortem Examination.	History.—Disease fatal. Post-mortem Examination. Condition of Stomach.
					becility. He had hemor- rhoids, which bled much.	thick. Kidneys mon ten ventured highly granular. Liver and spleen healthy. Body thin and rather pale.	choids, which bled much. He had hemor-thick. Kidways much wasted and Mid-region—tubes very healthy. Pyloric choids, which bled much. highly granular. Liver and spleen region—tubes gathering into bunches at healthy. Body thin and rather some parts in their lower ends; no material increase of fibroid tissue. Duodenum lealthy. There were some crystals of triple phosphate on the surface of the stomach and duodenum.
iĝ	M. A. Harris.	This.	10 months.	e:		A backward child; no teeth; Large intestine presented in its ling from birth; was suckled upper part numerous spots of region—tubes very healthy, but of the numerous spots of region—tubes very healthy. By northing, and gelar-tumeraction and injection, and injection, and womiting, and gelar to have numerous minute pin healthy. Pyloric region—tuber lemaciation. It is lower numerous minute pin healthy, forming a continuous row glands were considerably enlarged, parallel follicles. In the interval emaciation acid in the intestine showed under the microscope a distinct loss of tissue, with a large solitary gland lying in the sub-mucous property of the property of the intestine showed under the microscope a distinct loss of tissue, with a large solitary gland lying in the sub-mucous	A backward child; no teeth; Large intestine presented in its surface pale; reaction acid. Splenic alling from birth; was suckled upper part numerous spots of region—tubes very healthy, but searcely for 9 months. She had diar-tumefaction and injection, and injection, and injection and vomiting, and gelis lower numerous minute pin-lealthy. Pyloric region—tubes quite hole ulcerations. The mesculerichealthy, forming a continuous row of simple glands were considerably enlarged, parallel follicles. In the interactions on the mucous members showed under the intestine showed under the intestine showed under the microscope a distinct loss of tissue, with a large solitary gland lying in the sub-nuncous
98	J. Frost.	٠٠	61	×.		Body in good condition. Membrane of brain healthy; sinuses and acid cerebral veins much congested, as débriu well as the substance of the brain. pigmoventricles filled with a slightly very opaque serous fluid. Both lungs waste and heart healthy; 2 oz. of tur-posits bid fluid in pericardium; spleen forma soft and pulpy. Other organs fatty, healthy.	Was taking mercury for Body in good condition. Mem-syphilis before admission, brane of brain healthy; sinuses and acid chocolate fluid, containing abundant Symptoms of fever. No sleep, cerebral veins much congested, as débris of tubular epithelium, and a little Pain in head. Pulse soft, not well as the substance of the brain. pigment. Splenic and mid regions—tubes frequent, Pupilisaticrawardsbe-Ventricles filled with a slightly very healthy. Pyloric region—tubes not eame dilated. Tongue black, opaque serous fluid. Both lungs wasted; some local sub-tubular nuclear depicked bed-clothes. He sank and heart healthy; 2 oz. of tur-posits, with interstital nuclear and fibroid and died in 9 days after ad budy. Other organs fatty. Empty, surface pale, smeared over with such a little properties of the properties of the problem of the properties of the problem in lower parts very mission.

W. Trowsdale, 45 M. He had 2 or 3 attacks of Both lungs most highly emphy. Contained acid chyme. Surface in pyloric cerebral symptoms, afterwards sematous, bronchial tubes inflamed, half much injected. Splenic region—tubes short breath, cough, and tre-Heart, liver, and spleen, healthy; folerably healthy, but much bulged and dismors; was very nervous. Had liver much congested. Kidneys of fended at their lower parts by epithelium; applyiation and pain in head, natural size, capsules very ad-free fatty matter deposited underneath the Appetite pretty good, took herent, surface uneven, some corti-basement membrane of the surface. In one treatment, but gotagain worse, stuffed with dense granular matter, be giving origin to cysts. Mid region—the tubes appearance of the much sund to cyst formation, by distension of the blind ends; there are sub-tubular nuclear deposits, and some more diffused nuclear formation in the substance of the mucous membrane. Pyloric region—tubes fatty, and forming bunches at their lower ends, with much interstitial	Had rheumatic attack Oct. Body in tolerable good con-Cavity large, containing an abundance of 3 and 19, after lask was treated dition, extremities colematous, deeply bile-tinged acid (highly) chyne. for heart disease. Ill 6 weeks, Left pleura three parts full of thuid, Splenic and mid regions—rather altered by has bad ocdema of legs 3 weeks much also in right. Lungs con-self-digestion, tubes very tolerably healthy. ago. Dry cough, dyspuca, gested, ectenations. In upper part Pyloric region—tubes show a tendency to except when quite still. Loud of left lung were 3 or 4 accumul waste; there are nuclear formations in submittal murnur at base and lations of softening fibrine and tubular tissue encroaching among the tubes, a months. Unine high co-solidated lung. No scrotulous de-fibroid formation. Much emorated Auroreanna, posit in any part, Pericardium Much emorated Auroreanna, and any accounted to the consequence of the consequence	became very bad, with heavi-flaced, mitral flaps rigid and ness and pain at epigastrium: opaque; bead-like fibrinous depo- 3 weeks after was much the sits along margins of aortic valves, same, could not take her food, and on auricular aspect of mitral. dreaded to go to sleep for fear Kidneys, spleen, liver, healthy. of being choked. Soon after Uterus equal a large orange in size,
Zi .	떠	
2. 3.	30	
W. Trowsdale,	M. A. Goose.	
XXXVII.	∞ ∞	10

Condition of Stomach.	she miscarried. Urine became walls thin, very firm, its lining scanty and highly albuminous, membrane dark, and roughened She soon sank. She soon sank. broad ligaments and ovaries contained fibrine and puriform dark coloured fluid. Left renal vein contained fibrine undergoing change. Of aged cachectic appear. Body thin. All the organs of cavity cmpty, reaction neutral. Splenic ance. Admitted January 13th chest and abdomen tolerably and mid regions—tubes healthy. Pyloric for difficulty in passing urine, healthy. On left side of bladder a region—tubes fatty in their lower parts, which had increased during pea-sized orifice, opening into a which are more or less gathered into bunches, the preceding 14 days almost very large abscess on left side and with some interstitial nuclear and fibroid	Utine highly offensive, con-prostate. This absess had been facing pus. On 15th, an ab-opened from the perimeum, the cess was opened in the peri-arcolar tissue of which was sloughy. Surface 2 days urine passed by the urethra. Died by asherine well until to Lungs riddled with vomice at months ago, when cough, their upper part, and full of tuber tubes very greatly atrophied; the tissue inmands ago, when cough, their upper part, and full of tuber. Itubes very greatly atrophied; the tissue inmanding and eligity came cless. Kidneys enlarged and in masses. Mid region, in about the same state. Pyloric region—tubes in generally action—tubes in generally action—tubes in granular and nuclear interstitial deposit.
Post-mortem Examination.	she miscarried. Urine became walls thin, very firm, its lining scanty and highly albuminous, membrane dark, and ronghened by fibrinous deposit. Veius in broad ligaments and ovaries contained fibrine and puriform dark coloured fluid. Left renal vein contained fibrine undergoing change. Of aged cachectic appear—Body thin. All the organs of ance. Admitted January 13th chest and abdomen tolerahly for difficulty in passing urine, healthy. On left side of bladder ar which had increased during pea-sized orifice, opening into a when preceding 14 days almost very large abscess on left side and we had the preceding 14 days almost very large abscess on left side and we had the preceding 14 days almost very large abscess on left side and we had the preceding 14 days almost very large abscess on left side and we had the preceding 14 days almost very large abscess on left side and we had the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we had a supplementation of the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abscess on left side and we have the preceding 14 days almost very large abs	to bladder, and extending into the Tribis absesses had been d from the perimenur, the ra quite healthy. gs riddled with vomicæ at upper part, and full of tuber- Kidneys enlarged and mot-
History.—Piscase fatal.	she miscarried. Urine became scanty and highly albuminous. She soon sank. Of aged cachectic appearance, Admitted January 13th for difficulty in passing urine, which had increased during the preceding 14 days almost	
Sex.	×	¥
Age.	20	4.
Name.	D. Brooker.	E. Lonergan.
No.	68	06

E. Taddenham. 27 F. III 12 mouths. Breath very Body emaciated, chest very con- Surface stained by bile, reaction feelly short, aphonia last week; has tracted. Tubercles and vouice in acid. No injection. Splenic region—tubes had some diarrheea. Died in both lungs. Cordæ vocales ulcer- in some degree wasted, epithelium stunted ated. Stomach and other visceral some interstitial fibroid formamently tion. Mid region—tubes in some parts, some intersitial fibroid formation. Pyloric region—tubes almost entirely atrophied, in some parts, in some sone, with nuclear masses in some shoes.	Confined to bed for 4 or 5 Brain wet, but healthy. Sub- Contracted very much, contained some years, had suffered long from arachinoid fluid increased. Slight chocolate coloured, feebly acid fluid, fine chronic rheumatism, and had chickening of arachinoid on convex dotted injection. Splenic region—tubes attacks of mental aberration, surfaces of hemispheres, scarce any have perished extensively amid an inflawith bronchitis. No dyspeptic symptoms. Died gland: Pacchioni. Langs rather tration of nuclei and granular matter, some emphysematous, much congested large masses of nuclei are seen. Mid region, and condensed at back part. Heart in nearly same state; large nuclear masses healthy; a white pericatical at hases of tubes. Pyloric region—tubes patch. Liver fatry. Spleen small, much obseured and wasted from the same healthy. Kidneys wasted and gra- interstitial deposit. Duodenum appeared and the same contensed and thin, fingers licalthy.	Coachman, has lived freely. Body well made, purple spots Surface much injected, rather marbled, Ilas had an eruption and on various parts of surface. Blood with two patches of black staining near swelling of legs 3 days. Pulse extravasated at back of scalp, middle of great curvature; pyloric region full and hard. After vense-Brain very wet, rather more fluid covered with tenacions muchs, reaction nosection ad 5xij, purpura was than natural in ventricles, not where acid. Splenic region—tubes in great less, but hæmaturia came on otherwise diseased. Lungs very measure broken up amid an inflirating Urine very scanty. After cup-congested, cedenatous, some ex-fibroid stroma, with large nuclear masses in ping on the loins, blue pill traxasation in lower part of right, the deeper parts of nucous membrane, and diuretics; the quantity of Heart's cavities rather dilated, Among the debris there was an oval cyst
Ill 12 mouths. Breath very short, aphonia last week; has had some diarrhæa. Died in 8 days.	Confined to bed for 4 or 5 years, had suffered long from chronic rheumatism, and had attacks of mental aberration. No dyspeptic symptoms. Died with bronchitis.	Coachnan, has lived freely. Ilas had an eruption and swelling of legs 3 days. Pulse full and hard. After vensescetio ad 5xij, purpura was 1638, but hæmaturia came on. Urinc very scanty. After cupping on the loins, blue pill and diuretics; the quantity of
<u> </u>	<u>r</u>	M.
27	0,7	49
E. Taddenham.	Ann James.	B. Patrick.
6	25	93

Condition of Stomach.	urine increased, but continued otherwise normal. White peri-filled with granular cells. Basement mem- to contain blood. Blood has cardial patch. Liver very firm and brane well marked. Mid region—tubes also passed in the stools and circhosed, with opaque capsule, extremely wasted amid an infiltration of vomited. He sank and died Spleen very soft, capsule opaque, nuclei and fibroid matter, with sub-tubular in 15 days after admission. Kidneys very large, smooth, with nuclear deposits. Black pigment is depo- motified surfaces and swollen cor- sited in the stained spots, chiefly between, but partly also within the tubes. Pyloric region, tissue in same state, groups of region, tissue in same state, groups of region, tissue in same state, groups of	Subject to bronchitis 3 Body emaciated, pale. Right Spienc and mid region—tubes fairly rears or more, had no dys-lung condensed in parts, and code-healthy. Pyloric region—tubes more or peptie symptoms. Sank gra-matous; the bronchi somewhat less obscured and atrophied by interstitial dually. A line condensed and their mucous lining nuclear deposit. Reaction acid. Duodenum thickened. Left lung much con-healthy, densed and congested, bronchi dilatedandinfamed. Heart healthy and liver. Kidneys rather wasted and granular. Spleen solid, of dirty gray aspect on anterior	Tenant of an almshouse, surrace walls flaceid, cavities surface presents several black-stained was I week in union; not ill, loaded with blood. Lungs com-spots, and contained much chocolate fluid of but feeble, and complained a pletely adherent to walls of chest, acid reaction, generally pale. Splenic relittle of short breath. She their upper parts full of miliary gion—tubes tolerably healthy, but rather made no complaint of dys-tubereles, and much condensed altered by self-digestion; blood turned into pepsia. Died quietly in bed, and consolidated. Kidneys, liver, yellow pigment. Mid region—tubes healthy, and spleen, tolerably healthy. Intered in some parts by self-digestion; at one dark-stained spot there were a vast number of large black grains within the tubes. Pyloric region—tubes generally healthy. Duodenum healthy.
Post-mortem Examination.	otherwise normal. White pericardial patch. Liver very firm and cirrhosed, with opaque capsule. Spleen very soft, eapsule opaque. Kidneys very large, smooth, with mottled surfaces and swollen cortex. Blood very fluid.	Body emaciated, pale. Right Spletung condensed in parts, and code-healthy. matous; the bronchi somewhal less obsidiated, and their mucous lining nuclear thickened. Left lung much con-healthy densed and congested, bronchi dilated and inver. Kidneys rather wasted and granular. Spleen solid, of diry gray aspect on anterior	surface. Ileart—walls flaccid, cavities loaded with blood. Langs completely adherent to walls of chest, their upper parts full of miliary thanceles, and much condensed and consolidated. Kidneys, liver, and spleen, tolerably healthy.
HistoryDisease fatal.	urine increased, but continued to contain blood. Blood has also passed in the stools and vomited. He sank and died in 15 days after admission.		Tenant of an almshouse, was I week in union; not ill, but feeble, and complained a little of short breath. She made no complaint of dyspepsia. Died quietly in bed.
Sex.		<u>r</u> .	È,
Age. Sex.		52	69
Name.		M. Ensor.	Ann Coles.
S.		Ö	5.0

96 W. Burnell. 16 M. 14 days ago inflammation Bodyrather thin. Heart healthy, Surface smeared with a little replox, or first leg came on without some turbid serum and films offeebly acid fuil. These healthy in all the any cause. An absense of first in pericardium. Left lung three regions, rather altered by self-digestion certed in middle fage of efficient to pericard and serve and all the species which was red hand 1 week before. After part, fivinous layers on plears stained. Dondenum appears healthy to the admission several incisions flight in my rather congested at eye, but the willi are utterly ragged and made, much purtlent fills. Dack part, betalthy; a cyt about wasted, they have no bissoment membrane, charge. Urine found albu-the size of a wainti impacted in the and are full of fatty granules; reaction of minous. His respiration be. His sa, of a variant impacted in the and are full of fatty granules; reaction of minous. His respiration be. His sa, of a variant impacted in the and are full of fatty granules; reaction of minous. His respiration be. His subject to old and damp of sub-archidistonardininghknee. Surface slightly pinkish, covered with a habit, subject to polies. Willichlar inflammation of left arm, diry chocolate coloured layer, consisting of warm with walking was ex. Brain belalty, except an increase in mucons plasm. This shighly feet and legs. Has now pain congested. Spinal cord healthy, each. Spient region—those quite healthy, in lower part of fack, has for directly cord healthy, and sold more part of fack, has for directly cord benefits are decidedly altered by every acid. Pulsequiet. After it was much softened, but not dis-the acid. Mid region—those quite healthy, and the healthy and sold, horsel week issue and fair-class are decidedly aftered by heart healthy and sold, most peculiarly ranic and mid region—those quite heart healthy. Plenter and elsewhere, covered with a thin layer of head incontinence of uning levels are decidedly in the lander has been at evudation in ablone. In the sub-mo			
	16 M.	44 M.	62 M.
	ırnell	vstea	night
	7. Bu	, K	7. Ž
96 26 86			=
	96	26	86

Condition of Stomach.	last few days. Ilas had a fasciculated, contained a large tance along the bases of the tubes and among cough for years. Urine light quantity of purulent urine, ureters them. In one section there was a largish coloured, soon becoming alka-and pelvis of kidneys dilated. Kid-cyst, with a caudate offset. The catheter drew off a good merous small abscesses dissemiled of urine after he had mated through their subsance. An animate of the work-body and part thin and pale. An inmate of the work-Body rather thin and pale, surface rather injected, especially at the contains and walnut projected in the althy. Lungs surface rather injected, especially at the less some years, lad no par-Heart appeared healthy. Lungs surface rather injected, especially at the civilar symptoms of dispersival and spleam tolerably healthy; tenacious whitish mucus. No acid reaction. Symptoms; improved, but one kidneys also, but shrunken at one Splemio region—some trace of manmillation, night was found speechless, part of surface. A very large there is an extensive infiltration of nuclear partier getting out of bed, and fibrous tumour in the pelvis. Particles among them. Nid region—tubes nuch carbos much closed and intensitial includes and intensitial includes and intensitial includes and dibroid intensitial includes and obscured by medear and fibroid intensitial	Suffered with symptoms of Lungs congested, but free from Surface quite pale everywhere. Cavity morbus cordæ; scrofulous 6 tuberele. Heart, liver, kidneys, contained a good quantity of dark acid fluid, months or more. Appetite and spleen, healthy. Numerous Splenic and mid regions—tubes tolerably generally good, took food well, calarged glands, solid in the lower healthy, some abnormal fibroid and nuclear After the opening of a large part of ileum, with much surround-formation at their bases in some spots. weakened; feverishness came gauised, cartilages destroyed, bone on shortly before death, and carious there was at last some bleed.
Post-mortem Examination.	last few days. Ilas had a fasciculated, contained a large tance along the bases of the cough for years. Urine light quantity of purilent urine, ureters them. In one section the coloured, soon becoming alka- and pelvis of kidneys dilated. Kid- cyst, with a caudate offset, hine, contains pus and easts (?), news softened, injected with nulleast of a good merous small absessess disseniable of urine after he had nated through their substance. The catheter drew off a good merous small absessess disseniable of ourine after he had nated through their substance. An innute of the work- good in after, fibrous capsule. An innute of the work- Body rather thin and pale. Goody rather thin and pale. Cavity much confracted notes some years, lad no par- Heart appeared healthy. Lungs surface rather injected, eicular symptoms of dispepsia. emphysematous and eedenatous, pivoric part, where it is citalla bout l week, with febrile Liver and spleen tolerably healthy; tenacious whitish mucus. Symptoms; improved, but one kidneys also, but shrunken at one Splenic region—some trace night was found speechless, part of surface. A very large tubes tolerably healthy, byloric region and hour.	Suffered with symptoms of Lungs congested, but free from morths cordæ; serofulous 6 tuberele. Heart, liver, kidneys, months or more. Appetite and spleen, healthy. Numerous generally good, took food well. enlarged glands, solid in the lower halveess he got emaciated and ing congestion. Hip-joint disor-labseess he got emaciated and ing congestion. Hip-joint disor-labsees the feerishuess came ganised, cartilages destroyed, bone on shortly before death, and carious there was at last some bleed.
History-Disease fatal.	last few days. Ilas had a fasciculated, contained a cough for years. Urine light quantity of purulent urine, a coloured, soon becoming alka-and pelvis of kidneys dilated. The catheter drew off a good merous small abscesses differed of urine after he had hated through their substances as well as the same was the same on, and walnut projected into the bliggreen vomiting came on, and it was of prostate gland strules and in mate of the work. Body rather thin and house some years, lad no par-Heart appeared healthy, itellars symptoms of dispepsia, emphysematous and cedem Ill about I week, with tehrile Liver and splean tolerably he symptoms; improved, but one kidneys also, but shrunken anglet was found speechless, part of surface. A very after getting out of bed, and fibrous tumour in the pelvis, died in an hour.	Suffered with symptoms of Lung morbus cordæ; scrofulous 6 tuberel months or more. Appetite and spenerally good, took food well. calarge After the opening of a large part of abscess be got emaciated and ing con weakened; feverishness came ganised on shortly before death, and carious there was at last some bleed.
Age. Sex.	Cc.	N.
Age.	15	2
Name.	M. Trivett.	W. Smith.
1	60	100

EXPLANATION OF THE PLATES

Illustrating Dr. Handfield Jones's Paper on Morbid Changes in the Mucous Membrane of the Stomach.

Fig.
1. Stomach tube, containing black pigment grains at its lower part.

2. Vertical section of splenic region of mucous membrane of the stomach, the tubes all broken up, and their débris mingled with very numerous black pigment globules. Some of the altered tissue is shown more highly magnified at (a). The mucous membrane was of a very dark colour, in some spots black.

3. Vertical section of mucous membrane of stomach in mid-region. A deposit of nuclear particles is seen encroaching on the tubes.

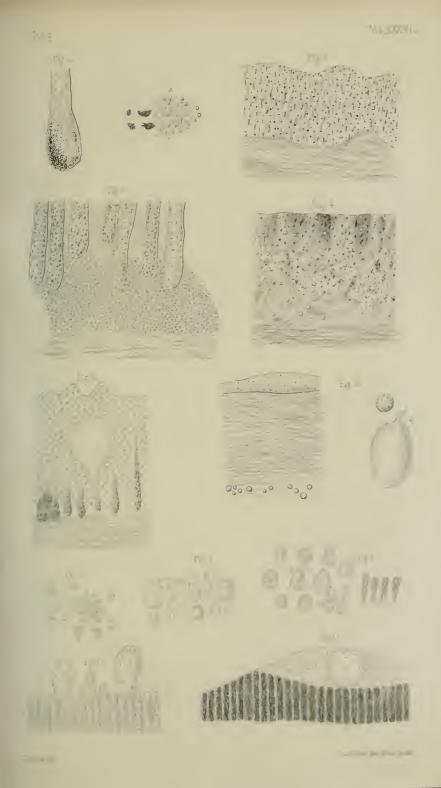
- 4. Vertical section of mucous membrane in the mid-region, showing complete wasting of the tubes, and their place occupied by granular and oily detritus and fat-vesicles. The basement membrane still persists.
- 5. Vertical section of mucous membrane in pyloric region, the tubes much obscured and atrophied by interstitial nuclear deposit. A cystic cavity with a caudate offset is seen in the substance of the mucous membrane.
- 6. Vertical section of mid-region of mucous membrane of the stomach, showing the tubes utterly wasted, and replaced by fibroid tissue. At (a) are shown two cyst-like remnants of the tubes which were brought into view by acctic acid. The basement membrane of the surface still exists.
- 7. Atrophicd epithelium from stomach tubes.
- 8. Catarrhal mucous from surface, it contains some cells from the tubes, numerous nuclei, and a columnar particle.
- 9. Healthy epithelium; cells from the tubes and columnar particles.
- 10. Vertical section of gastric mucous membrane in mid-region, showing several papilloid masses of epithelium exuding from the follicles.
- 11. Vertical section of upper part of mucous membrane in the mid-region, showing a cyst lying in a nuclear deposit. Diameter of eyst inch. It contains nuclei, and a clear fluid.
- 12. Vertical section of mucous membrane in pyloric region: the tubes in the upper part have disappeared, in the lower they are undergoing fatty degeneration. Much oily matter is dispersed through the tissue. The basement membrane is gone.
- 13. Vertical section of mucous membrane of mid-region of stomach. The tubes are almost entirely obliterated, and the basement membrane is lost.

EXPLANATION OF PLATES.

Fig.

- 14. Vertical section of mucous membrane of stomach in the mid-region.

 (a) Basement membrane. (b) Tubes degenerating. (c) Corium thickened. (d) Submucous tissue.
- 15. Remnants of three tubes breaking up into granular tracts of nuclei.
- 16. Vertical section of mucous membrane of stomach about the midregion. The tissue is pervaded by nuclear deposit, and the tubes are indiscernible. Nuclei are seen also in the corium and submucous tissue. At the lower part are two opaque fatty masses; the basement membrane is seen in the upper border.
- 17. Vertical section showing the mucous membrane fissured in two places down to the corium.
- 18. Vertical section passing through a notch on surface of mucous membrane: the notched part is covered by a layer of nuclei. Tubes partially disintegrated.
- 19. Mucous membrane of stomach; the tubes atrophied, the whole tissue pervaded by nuclear deposit.
- 20. Vertical section of pyloric region, showing the villi and the nucleated substance within them. This substance was abnormally developed in the deeper part of the nucous membrane.
- 21. Vertical section of mucous membrane of stomach, containing a nuclear mass in its substance. The mass is in part displaced, and an empty cavity left. The surface is covered by a layer of disintegrated epithelium. (a) Separate nuclear particles.
- 22. Vertical section of mucous membrane, showing a large cystic cavity occupying its whole thickness. (a) Basement membrane of surface. (b) Mucous membrane pervaded by nuclear deposit. (c) Corium.







OF

FATAL ASPHYXIA,

CAUSED BY

THE DETACHMENT OF A DISEASED BRONCHIAL GLAND WHICH WAS IMPACTED IN THE LARYNX.

BY

GEORGE EDWARDES, OF WOLVERHAMPTON,

FELLOW OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, AND OF THE
ROYAL MEDICAL AND CHIRURGICAL SOCIETY OF LONDON;
LATE SURGEON TO THE SOUTH STAFFORDSHIRE GENERAL HOSPITAL.

Received April 26th .- Read May 9th, 1854.

Joseph Perry, about 8 years of age, of fair complexion and light hair, considered healthy but delicate looking, was playing with boys of his own age, when it is said he was offended or struck by one of his play-fellows. He ran off to tell his mother, and just as he got to his parent's house, a distance of thirty yards, he rushed towards a female, whom he met, and who thought that the child was in a fit. She carried him quickly up stairs to his mother, who charged the child with having swallowed something. This he denied in a voice sufficiently strong and distinct to be understood. His struggles became so violent that he could scarcely be held by ordinary force. The head was often thrown forcibly back, and the arms were extended occasionally by a similar strong effort. The face was discoloured, the countenance was extremely anxious, and he uttered the expression more than once, "Mother, I shall die." During the struggling also, he cried out that he wanted to make water, and almost instantaneously he voided both urine and fæces. There was no cough, and the bystanders said there

was not any noise in the throat, but there were tumultuous sounds about the upper part of the belly. My partner, Dr. Bell, accompanied by Mr. Gatis, saw him about half an hour after the seizure; at that period no sound could be discovered by a hurried examination either in the trachæa or chest, except the weak action of the heart; the countenance was dark, and the child was making some feeble struggles, evidently death-throes. In the hurry of the moment there was no opportunity of getting any distinct knowledge of the previous history, beyond the surmise that the child had swallowed something.

Dr. Bell and Mr. Gatis immediately opened the trachea, when a little air issued from the opening, artificial respiration was attempted for some time by means of a female catheter, but without effect, as the child only gave two gasps after the operation.

I assisted in the examination of the body seventy-two hours after death. There were no marks of external violence. The jugular veins on both sides were greatly distended. On opening the chest, the lungs and heart occupied their usual position, and presented their natural appearances, except that the lungs were uniformly dark, and greatly congested. Both sides of the heart were empty. and there was an ounce of bloody serum in the pericardium. Touching the under surface of the epiglottis, and extending through the rima glottidis into the larynx, was a body about an inch in length, of irregular thickness, and presenting in its form something of an hour-glass contraction; one end was thicker and longer than the other; the substance was whitish, and covered with mucus, and in appearance much resembled a piece of chewed newspaper, being marked with black or blueish grey lines, and clots, exactly as a piece of chewed printed paper would appear. It was easily removed from its position. On a further examination it was evident that the body was a bronchial gland, broken up irregularly, and adhering at the narrow part by cellular tissue. Slitting open and tracing the trachwa, the spot from which the gland had issued, was soon found; it was

on the posterior part of the right side, just above the bronchial bifurcation. The opening was ragged and irregular, and communicated with a cavity behind, sufficiently large to contain a good sized nutmeg. The other bronchial glands were normal, the trachæa contained some frothy mucus, and the lining membrane was somewhat congested.

There appeared to be no glandular disease in any part of the body, nor was there the slightest appearance of tubercles in the lungs. The stomach contained no food, but was

much distended with air.

The case is interesting, not only from its novelty, but in many points of view. Did suppuration commence within the gland, or was this a case of ulceration around the gland, detaching it from its bed and opening a passage for it into the trachea? Again, did the gland at once pass into the trachæa, or was it a gradual process? The shape of the gland seems to indicate the latter process, and probably the blow the boy complained of, or a sudden effort at play, was the means of entirely disengaging it from the opening; the expulsive efforts afterwards forced it into the glottis and destroyed the child. In either case there appears to have been no symptoms to point out the mischief which had been going on in the child, who was represented by his parents as having been free from cough, hoarseness, or difficulty of breathing. As nearly as can be calculated, the time which elapsed between the commencement of the suffocating feeling and the death of the child, was half an hour; hence there could not have been complete closure of the glottis at first. Indeed it is a question whether the obstruction to the breathing was ever complete continuously, or was only to such an extent as to prevent that ingress and egress of air, which is necessary for the sustenance of life, each respiratory act being so imperfect that the blood by degrees became poisonous and unfitted to supply the nervous stimulus required to maintain the heart's action to transmit the blood through the lungs. Hence their dark and engorged condition after death; and hence, probably, the want of

success in the attempt to inflate the lungs after tracheotomy.

This case is also interesting in a medico-legal point of view. False accusation might easily have been made; indeed the boy in this very case complained of being ill-used by his playmates, and had any of them been much older and stronger than himself, there would have been great difficulty in convincing the parents that the death of their child had not resulted from violent and improper treatment. Suppose two persons to have been quarelling and blows were exchanged, during which a diseased brouchial gland became lodged in the glottis of one of them; he falls and struggles as if suffocating, and half an hour afterwards expires; the presumptive evidence certainly would be that the blows had killed him, and it might require a very careful post-mortem examination on the part of a medical witness, who had not seen the person before death, to convince himself and satisfy a jury that a little whitish elongated glandular body lying loosely in the larynx had been the cause of death.

With regard to the treatment of the present case, I think it is obvious that any means adopted at the period when Dr. Bell and Mr. Gatis saw the patient would have proved ineffectual; tracheotomy, however, appeared to offer the best chance, and probably if performed earlier, might have saved the boy's life.



The Bronchial Gland as it appeared after it was taken from the glottis.

REMARKS ON A PECULIAR FORM

0F

TUMOUR OF THE SKIN,

DENOMINATED

"PACHYDERMATOCELE,"

ILLUSTRATED BY CASES.

BY

VALENTINE MOTT, M.D., C.L.D.,

EMERITUS PROFESSOR OF SURGERY IN THE UNIVERSITY OF NEW YORK.

Received May 9th .- Read June 13th, 1854.

THE dermoid tissue is liable to a greater variety of diseases than any other in the body, and although a great number have been carefully and accurately described, there are some which have not yet received the attention of professional men. Among the latter, there appears to me to be none more remarkable than that which is the subject of the following paper.

The following five cases illustrate this peculiar state of the dermoid and subjacent tissues, and I propose to give to it the name pachydermatocele; all have been congenital, the disease beginning in a brown spot or mole, as such appearances are generally called when small, and increasing with the years of the individual, until, as in three of my cases, they presented hideous and disgusting deformities.

The morbid structures have all been more brown than the surrounding integrments, with a flabby feel, very like a relaxed and very emaciated mamma. In several of the cases there were two and three layers or stories, as in the one upon the neck and shoulder, resembling the fanciful and successive turns of a

tippet, or three separate folds of a rich maroon velvet curtain as may be seen in plate III.

They do not appear to possess any great degree of vascularity, neither having veins visible upon the external surface, nor diminishing in size much after being detached from the body, therein differing essentially from the nævus maternus, or ancurism by anastomosis. The cases of the two boys, in which the disease involved extensively the scalp, one side of the face, and extended below the base of the jaw, presented by far the greatest amount of blood-vessels.

On cutting a slice transversely, or making an incision into these growths, the sub-dermoid structure to the eve seems to be hypertrophied areolar tissue, with very little evidence of blood-vessels running through it. From their general appearance and duration, there is no evidence whatever of anything malignant in their structure or tendency. In one of the cases there was a return of the same kind of tumour upon the same spot namely the head, though to a less extent, demanding a second excision, and it returned again, and is now of the same shape and character as at first. In another patient, a boy, the same disposition to return was observed during the granulating process, but it was completely conquered by the patient and skilful application of compressed sponge and the roller bandage. In the other three cases there was no disposition whatever to a reproduction of the disease.

The sense of feeling was somewhat diminished below the natural standard in all of the cases. In only one was there any ulcerative action, and this arose entirely from want of attention to personal cleanliness. The largest required to be carefully washed every day with soap and water, then well dried and powdered with some farinaceous substance. If this was neglected for one day an acrid fetid discharge took place, soon leading to exceriation.

Case I.—A young woman, et. 24, of an excellent constitution, and uniformly good health, requested me to examine something which had existed from her earliest

recollection, and was steadily increasing in size. She said it was a swelling on the left side, not attended with the least pain, and only annoying to her from interfering with the comfortable and symmetrical arrangement of her dress. She evinced a delicacy in showing it, arising more particularly from some story of a fancy of her mother as to the cause.

On exposing it to me I found a flat tumour from four to six inches in length, and nearly the same in breadth, hanging completely pendulous. It was situated on the left side a little obliquely, about four inches below the mamma, and on a line with the axilla. It was about an inch in thickness, of a brown colour, and on closely inspecting the surface it was found to be beautifully striated, the striæ running in a serpentine manner. This was visible on both sides, and scores of dark points were distinctly to be observed sprinkled over the striæ. These spots were of the size of common and large pins' heads, and when picked out might be said to resemble dry gmelanotic formations. (Vid. plate I.)

At her request the growth was removed by two incisions, each about eight inches in length, so as to include every part of the abnormal growth. It was dissected from portions of the pectoralis major, senatus magnus anticus, and latissimus dorsi, each of which muscles appeared perfectly sound and natural. The extent of integument left did not allow the edges of the wound to be closely approximated. The considerable extent of surface thus left uncovered granulated and healed very kindly without any untoward circumstance.

There was not any return of the morbid growth.

CASE 2.—This occurred in a maiden lady, more than 40 years of age. The growth was situated on the left side, identical in shape, size, and attachment, with that described in the former case, but ulcerated in its entire extent, which condition also extended to some little distance around its attachments. The ulceration had been spreading for several years, and the fetid odour it emitted was singularly loath-some. This I am confident must originally have been

occasioned by the personal filth and disgusting neglect of the patient, who though wealthy, was the most insupportable miser I ever knew, denying herself and servant the most common necessaries of life.

The fetid mass was removed by a simple dissection from the subjacent muscles, as in the former case. Several small arteries were secured after the tumour was removed. A larger surface was from necessity left to be healed by the second intention.

The first four days after the operation were passed without any untoward or unfavorable circumstance. After this she became excessively anxious about her property, accusing her servant and family of robbing her, and saying that she should be left penniless and in want. Fever now set in, which in a few days assumed a typhus form, and soon terminated her life.

Case 3.—A. R, a boy, æt. 14, of a sound constitution, consulted me about a hideous and disgusting deformity of one entire half of his head and face. It consisted of three layers of tumours, from the crown of the head to some distance below the base of the lower jaw. One of them was formed in or involved the cyclids, which were carried down to the lower part of the face. When this portion was raised up the ball of the eye appeared sound in the bottom of a canal three or four inches in depth.

No pain at any time had been connected with this abnormal growth. As the mother states, it was noticed shortly after birth on the side of the face in the form of a small point or pimple, from which all the loathsome and disgusting deformity has proceeded. This boy was so exceedingly deformed and monstrous, as to be an object of terror to the children in his vicinity, and of sport and amusement to the idle boys.

These tumours had the same brawny feel as the rest, and the cuticle had a dry corrugated and scaly appearance where it covered the striæ and irregularities of the hypertrophied tissues underneath. This abnormal mass now involved the scalp of one side of the head, from the vertex to the centre of the forehead, one half of the nose, the upper and lower lips, the whole side of the face, and extended below the base of the lower jaw, back to beyond the ear. At all these points it seemed to occupy the whole of the dermoid tissue, and was continually increasing in size. (Vid. plate II.)

The age at which he had now arrived gave him interest in his personal appearance, and induced him to ask if some change could not be made in it for the better by a surgical operation. This I attempted to do at his request, apprising him and his parents at the same time that the operation was attended with danger.

After being put under the influence of chloroform, an incision was commenced at the vertex of the head, and carried down over the forehead, inner canthus of the orbit, centre of the side of the nose, by the edge of the angle of the mouth, over the chin, and a short distance upon the neck. Another, from the same point above, reached along by the ear, and passed over the base of the jaw, and met the other upon the neck. One or two transverse incisions were afterwards necessary to put the parts in a favorable state to bring the edges together and adjust them by sutures.

The redundant reticular or areolar tissue, was so great, and appeared so completely to occupy the place of the natural structures, that not a muscle of the face could be found after the most careful dissection. It seemed, indeed, as if this growth extended to the membrane of the mouth. The vascularity far exceeded my expectations for such a tissue. A great number of arteries required ligatures. The quantity of blood lost was considerable from the arteries, as also from several large veins. Adhesive plaister, lint, and a double headed roller, completed the dressing.

Shortly after recovering from the anæsthesia, an anodyne of morphine was exhibited to allay pain and quiet the mental agitation under which the boy laboured. Much of the wound healed by the adhesive process, and what suppura-

tion followed seemed to favour the melting down and destruction of the superabundant morbid tissue that remained.

During all the process of granulation and cicatrization, firm pressure was kept up by a roller carefully adjusted to all parts of the head and face.

He recovered completely from the operation, and his improved appearance was greatly calculated to give satisfaction to himself and family, as well as to gratify the operator. It was not many weeks, however, before there were striking evidences of a renewal of the growth, in defiance of the continued pressure of the roller bandage.

The growth was gradual but constant, and after some months its magnitude was so considerable as to induce him again to request its removal. Its size was now far less than at first.

Putting him under the influence of chloroform, several incisions were made about the face and side of the head, in order to remove as much of the morbid part as possible, as well as to secure more points for cicatrization. He lost much less blood in this than the first operation, and comparatively but few arteries required ligatures. No untoward circumstance attended the after treatment, and again much benefit resulted to the patient in appearance.

This improvement, however, was but temporary, for in less than a year the morbid formation commenced again to grow, and now has attained a magnitude, which though less than that of the original growth, makes him a hideous object.

Case IV.—A boy in excellent health, about twelve years old, consulted me about a tumour on the opposite side of the face, identical in all its physical characters, but of less size, than that in the preceding example. As his appearance was far from being beautiful, he was also desirous of being improved by an operation. This I consented to do; preparing him, however, with the probability that it would return. This growth commenced also in early infancy, and, from all that could be learned, was probably congenital.

While in a state of anæsthesia, I made several extensive incisions, and cut more liberally into the surrounding healthy integuments, with a view of not only removing as far as possible all the abnormal tissue, but to obtain also the benefit of the two reparative processes of granulation and cicatrization. The benefit of this soon became very apparent, but the permanency of the cure may be greatly attributed to the persevering use of compressed sponge, and tight bandaging over the granulating surface by my estimable friend, Dr. Batchelder. About six years have now clapsed, and there has not been any return of the morbid formation.

Case v.—This was truly a monstrous morbid production. Though disgusting, and even frightful, to ordinary beholders, there was in its organization and external characters, looking at it as a morbid growth, something symmetrical and beautiful. From the mother's statement it was observed soon after birth.

Miss S—, æt. about 45 years, of robust country health, came to me from the western part of the State of New York, as she said, to show me a tumour, and to know if it could be removed. From the compact and regular arrangement of her dress, the impression on my mind at once was, that it was of no great importance as to size. My astonishment was not a little excited, as soon as she removed her dress from the chest and neck, not only from the immense size of the mass, but that it could all be so completely stowed away, as not to disturb the apparent symmetry and harmony of her proportions.

The tumour was of a dark brown or copper colour, of a soft elastic feel, very much resembling a collapsed lung or a placenta. It hung in beautiful and fantastic folds, like the convolutions of a tippet over the neck, shoulder, and chest. There were five of these folds or stories, the smallest above, the longest or broadest below.

It was attached to the healthy integuments behind and in front of the ear—directly under its lobe—to the entire xxxvii.

extent of the side of the neck from near the nucha to the edge of the larynx and trachea, to the whole line of the clavicle and middle of the upper bone of the sternum, over the shoulder, part of the scapula, and reaching upon the arm to near the insertion of the deltoid muscle—over the entire pectoralis major to the middle of the sternum and ensiform cartilage, and to the upper part of the rectus abdominis and latissimus dorsi, with a portion of the serratus magnus anticus. The lowest loose fold hung a little below a line with the umbilicus. The entire length of the tumour was twenty-one inches, its breadth eighteen inches.

Stating to her that I thought it might be removed, she requested to have the operation performed, if there was, as she said, "any chance of her life." Being made insensible with chloroform, the operation was performed in the following manner:

An incision was made a little below the tumour, across the lower part of the deltoid muscle, and the growth was dissected from this muscle to the top of the shoulder, then from the side of the thorax and upper part of the abdomen, then from the whole line of the clavicle, the upper part of the sternum, the back of the neck, and from the trapezius muscle. It was now detached from about the ear, and the dissection continued towards the front part of the neck, in the direction of the course of the sterno-cleido mastoid muscle, until it terminated by an incision over the mesial line of the larynx and trachea in their entire length.

In all this extensive dissection many arteries required ligatures, and some of them were of considerable size. The most remarkable, and indeed monstrous, were two veins entering the sub-clavian, no doubt the external jugular in its anterior and posterior branches, each apparently separate. Their size was the greatest I ever saw in any superficial veins, being each not less than my fore-finger. They were running close together, and were seized successively the instant on being cut with the forceps, and were tied, to prevent the admission of air, from which, on one occasion, I had seen frightful and almost fatal effects.

As the tumour originated on the upper part of the neck, these two enormous superficial veins were probably the principal channels for returning the blood from the whole abnormal mass. They lay side by side, as they went through the deep cervical fascia, but probably just on entering the subclavian, they united, as is usual in the normal state.

As the operation was considerably protracted, from the extensive superficial dissection, and the large number of arteries which required ligatures, some exhaustion followed, but she was not alarmingly depressed at any moment, and quickly rallied when the anæsthesia was allowed to pass off.

After she had sufficiently recovered for any vessels to show themselves, and all bleeding was stopped, the wound was dressed with dry lint, compresses, and a roller to make a moderate amount of pressure. Shortly after the operation, an anodyne was administered to allay pain, and lessen irritation. For several days afterwards, until suppuration was established, she had considerable fever, but much less than I anticipated from so extensive a wounded surface. The fever was readily moderated by appropriate treatment, and the granulating process was soon established.

After between two and three weeks of progress in healing, everything seeming to be as favorable as could be wished, crysipelas spread itself extensively around the edges of the wound, accompanied by a vitiation of the discharge, and a sweeping away of the healing material. This state was accompanied with great disturbance of the brain and nervous system, with low fever, which imminently hazarded her life. By suitable and appropriate local and general treatment, the storm was arrested, the nervous and vascular system returned to a quiet and tranquil state, the wounded surface assumed a healthy appearance, and all again promised well.

Two or three weeks were now passed in an improving way, but on a sudden, without any physical cause, another attack of erysipelas burst upon the healthy and healing wound, affecting the general system, and put us all back again. This was, however, less violent than the former attack, and produced less have among the granulation. These seizures were from an atmospheric cause, erysipelas being at this season very prevalent in private as well as hospital practice.

By means of general tonics, nutritious diet, and stimulating dressings, the wound soon assumed again a more favorable appearance, and began to granulate and cicatrize. From the immense extent of the ulcerated surface, and the enfeebled state of the general system, various changes in the constitutional and local treatment were from time to time called for. These changes were properly met, and the wound had so far healed in three months that she was enabled to return home—a distance of more than two hundred miles.

On getting to her native village, she rapidly improved; and was soon enabled to return to her accustomed duties.

I have heard several times of her, and within three weeks had a letter from her. The wound for some time was entirely healed; but, at the time of her last letter, there was a small point that had ulcerated, without, however, manifesting any disposition to spread, or any peculiarity in its character. The critical period of life at which she had arrived, indicated to my mind the propriety of establishing an issue somewhere: I accordingly directed one to be made in the sound arm.

There has never been any appearance of a reproduction of the tumour; nor is there any at the present time. It is now about five years since the operation was performed.

This tumour weighed nine pounds, and was twenty-one inches in length, and eighteen in breadth.

My colleague, Professor Lovett, has kindly furnished me with the following notes of the microscopical appearance of one of the tumours:

"The specimen appears to me to consist of an hypertrophy of the skin, and of the subcutaneous cellular tissue.

"Under the microscope I find nothing but an exaggeration of the natural tissues. There are no evidences of a malignant formation.

"The diseased structures seem to me to be quite analogous to what was noticed in the case of elephantiasis of the leg, which I exhibited to you during the winter."







PlII





DISTORTION OF THE SPINE,

WITH

OBSERVATIONS ON ROTATION OF THE VERTEBRÆ AS A COMPLICATION OF LATERAL CURVATURE.

BY

THOS. HODGKIN, M.D., L.R.C.P., AND WM. ADAMS, F.R.C.S.

ASSISTANT SURGEON TO THE ROYAL ORTHOPÆDIC HOSPITAL;
DEMONSTRATOR OF MORBID ANATOMY AT ST. THOMAS'S HOSPITAL.

Received May 9th .- Read June 27th, 1854.

The late Gideon Mantell was born at Lewes, in the county of Sussex. He applied himself at an early age to the exploration of the fossils of the upper chalk formation, and on coming to London to attend the medical school of Bartholomew's Hospital, he took with him a collection of considerable extent.

On his return to Lewes to engage in practice, he still continued his investigations, and it will easily be believed that his labours were great, inasmuch as his most remarkable and successful researches were carried into the Galt and Wealden rag,—in the hard and untractile masses of the latter he discovered the remains of those lost gigantic reptiles, the Megalosaurus and Iguanodon.

Impaired health and other causes induced him to transfer his practice from Lewes to Brighton, and sometime after he again moved, and settled at Clapham, where his personal labours as to his favorite pursuits were restricted to the collection and examination of the few fossils to be met with in the gravelly alluvium.

It appears that in 1842, being 52 years of age, he suffered from excessive pain in the back, inducing him to apply an opiate liniment and leeches. Then he was thrown from his carriage upon the back; and the symptoms are reported to be aggravated, and numbness came on in the left foot.

After this it is stated that he attended a case of concussion of the brain, and walked home in an intensely cold night, when the lower limbs became paralysed, the bladder required the catheter. The rectum was also affected, and enemata were used.

After many weeks the power of voluntary motion slowly returned; sensation followed with intense neuralgia. The tumour in the back rapidly increased, with supposed fluctuation. During the period of nine months, Liston, Brodie, Bright, Lawrence, Stanley, Coulson, &c., were consulted. The tumour became slowly harder, and almost disappeared. Sensation continuing to return, the tumour again became larger and harder, and the abdominal aorta was pushed forward.

The cachectic appearance of the patient led to the suspicion of the formation of a malignant tumour in connexion with the bodies of the vertebræ, an idea which was subsequently abandoned.

By degrees the neuralgia became less frequent, but Gideon Mantell notes his health as broken up.

To relieve intense suffering, he sometimes resorted to anodynes, but it does not appear that he ever prescribed large doses for himself. On the last occasion a dose of this kind, which is believed to have been taken on an empty stomach, produced the symptoms of narcotic poisoning, which proved fatal.

Report of the Post-mortem Examination of Dr. Mantell. By Mr. Wm. Adams.

Died 10th November, 1852. Examination of the body 13th November.

A tall, well-developed, muscular man. As the region of the spine was the chief seat of interest, from there being a history of a tumour or swelling having existed in the left lumbar region, supposed to be dependent upon, or connected with disease of the spine, the body was first placed in the prone-position, and the dissection commenced from behind.

There was a slight fulness in the left lumbar region near to the spine, but certainly nothing amounting to a tumour. On pressure, three or four hard and prominent nodules could be felt, one above the other, situated from 2 to 3 inches to the left of the spinous processes, and on a level with them.

No lateral deviation of the spinous processes could be detected in any portion of the column. Both sides of the chest were fully and symmetrically developed. No tilting of the pelvis was apparent, though some deviation might have existed, as exact measurements were not taken, nor were the pelvic bones thoroughly exposed by dissection. It may therefore be said that the body did not present any remarkable external appearance. No obvious deformity existed. In pursuing the dissection from behind towards the abdominal cavity, it soon became apparent that the prominent nodules felt in the left lumbar region were the apices of the transverse processes of the lumbar vertebræ projecting backwards, and rising to the level of the spinous processes. The bodies of the lumbar vertebræ could also be felt projecting in an arched form, with the convexity outwards to the left side, and at first suggesting the idea of a hard tumour connected with the vertebral column. No morbid appearance presented itself in the soft tissues in this region. The subcutaneous cellular tissue and fat were everywhere perfectly healthy; the muscles were apparently quite healthy. There was no trace of any morbid growth, cyst of abscess, or of any other inflammatory process having existed in the neighbourhood; no thickening, adhesion, or other alteration in any of the soft tissues.

The body was now placed on the back, and the abdominal cavity was laid open in the usual way. A very severe lateral curvature of the spine to the left side in the lumbar region was now seen. The curved portion of the spine presented also a remarkably twisted appearance, from lateral rotation of the vertebra, so that the transverse processes of the left

side projected backwards, as above described, whilst those on the right side projected inwards towards the abdominal cavity. The anterior common ligaments of the spine, and the cellular tissue on the anterior and lateral aspects of the vertebræ, and also the psoæ muscles and other tissues, were in a perfectly healthy condition.

No traces of absecss or of any old inflammatory process could be found, and it being impossible that a lumbar absecss could have formed and disappeared without leaving some structural changes in the soft tissues surrounding the spine, it may confidently be asserted that no absecss ever existed,

A portion of the vertebral column, consisting of the three lower dorsal and all the lumbar vertebræ, with a portion of the sacrum, was removed for separate examination. Viewed from its posterior aspect, the apices of the spinous processes of this portion of the spinal column are seen to present a lateral deviation to the left side, the most prominent part of which, viz., between the spinous processes of the second and third lumbar vertebræ, measures rather more than half an inch from a vertical line drawn from the spinous process of the tenth dorsal vertebræ to that of the first sacral bone. This distance is easily diminished to a quarter of an inch by a slight effort at straightening, and this, as above stated, was not apparent previous to its removal, though as measurement was not then adopted, it might have existed.

The bodies of the spinous processes, however, instead of passing directly backwards, incline towards the left side, so that in this aspect, the sides of the spinous processes are brought into view. This deviation exists in the spinous processes of the first, second, third, and fourth lumbar vertebrae, but to a much greater extent in the second and third than in the others, the angle of lateral inclination in these being nearly 45°. The spinous process of the fifth lumbar vertebrae retains its normal direction.

The transverse processes of the first, second, and third lumbar vertebrae on the left side project backwards towards the skin at about an angle of 45°, and rise exactly to the level of the apices of the spinous processes. The transverse process of the fourth lumbar vertebra is very remarkably altered both in direction and form; instead of passing directly outwards, it curves upwards as a horn-like process, and approaches the transverse process of the third vertebra within three eighths of an inch; and instead of being flattened in its antero posterior aspects, it is compressed from above downwards, and expanded horizontally towards its free extremity. This expanded portion measures three quarters of an inch in its transverse diameter, and its under surface presents a shallow cup-like depression, coated with a thin layer of fibrocartilaginous substance, giving to it a well-marked character of an articular surface.—There can be but little doubt that this transverse process rested upon the crest of the ilium, articulating with it, as it were, by its expanded extremity, the form of which, together with its altered direction, being the result of long-continued pressure from the superincumbent weight. The oblique section made through the sacrum, in removing the parts, has unfortunately not included the corresponding portion of the crest of the ilium, but the above supposition is rendered exceedingly probable by the general aspect of the parts, and is also supported by the existence of a similar condition in the specimen closely resembling the present from Mr. Cæsar Hawkins's collection at St. George's Hospital. In this preparation the pelvis is attached, the corresponding transverse process presents a precisely similar appearance, and has only been slightly separated from the crest of the ilium, upon which it obviously rested, in the process of drying. The transverse process of the fifth vertebra has been sawn through in removing the parts, but from the portion still remaining, it must have been either absorbed to a great extent, or remarkably altered in form and position.

The transverse processes on the left side are widely separated from each other, whilst those on the right side are proportionably approximated. The distance between the transverse processes of the first and second lumbar vertebrae

on the left side measures rather more than an inch, and between those of the second and third vertebræ one and a quarter inches. The tranverse processes of the third and fourth vertebræ on the same side are remarkably approximated, in consequence of the altered form and direction of the latter above described; they are only three eighths of an inch apart. The transverse process of the fifth vertebra hás been sawn through in detaching this specimen. The distance between the transverse processes of the first and second lumbar vertebræ on the right side is only half an inch; and between those of the second and third vertebræ. and also of the third and fourth vertebræ, rather less than half an inch. The transverse processes of the fourth and fifth vertebræ on this side appear to be abnormally separated from each other, to some extent, the distance between them measuring fully an inch.

The articular processes have evidently been subject to a very severe amount of irregular pressure and strain, tending towards displacement, but they have at the same time become gradually altered in form, and considerably enlarged by the growth of bone, principally at the margins of the articular surfaces, which have thus been retained in contact. These appearances are well seen in a transverse section which has been made of one of these joints. The process by which the enlargement has taken place appears to be similar to that by which the enlargement of the articular extremities of bones (in the hip and knce-joints for example) has been shown by Mr. Wm. Adams to take place in the affection called chronic rheumatic arthritis. (See 'Trans. Path. Soc.,' vol. 3, paper by Mr. Wm. Adams.)

Viewed from its anterior aspect, the specimen exhibits a very severe degree of lateral curvature to the left side, involving the bodies of the two lower dorsal and the three upper lumbar vertebræ, with a remarkable degree of rotation of the vertebræ in the same direction, and also a very perceptible lateral curvature to the right side, involving the bodies of the two lower lumbar vertebræ and the sacrum; so that a distinct double curvature exists. The most pro-

minent point of the upper and larger curve is the intervertebral substance between the second and third lumbar vertebræ. If a vertical line be drawn from the centre of the tenth dorsal vertebra, and carried downwards through the centre of the sacro-lumbar articulation, it will be found, that the distance between this vertical line, and the most prominent part of the lateral curve, viz., the outer border of the intervertebral substance between the second and third lumbar vertebræ, measures three and a half inches.

The deformity of the spine cannot, however, be correctly described as a direct lateral curvature, for the bodies of the first, second, third, and fourth lumbar vertebræ are also rotated in a horizontal or transverse plane towards the left side, so that the anterior surfaces of the bodies of the second and third vertebræ have a lateral, rather than an anterior aspect. The rotation in these vertebræ, extends to very nearly 45° from the median plane. The eleventh and twelfth dorsal, and the first and the fourth lumbar vertebræ, are also implicated in this lateral rotation. In this anterior aspect of the specimen, it is also apparent, that absorption of the bodies of the vertebræ in the concavities of the curves, especially of the second and third lumbar vertebræ, and also of the intervening intervertebral substance in the upper curve, and of the intervertebral substance between the fourth and fifth lumbar vertebræ in the lower curve, has taken place to a considerable extent. In these situations, there is not the slightest indication of any inflammatory process having existed.

Viewed in profile, or from its lateral aspect, the natural curve of the spine, in the lumbar region, is seen to be reversed; and instead of presenting a convexity forwards, the three upper lumbar vertebra, together with the twelfth dorsal, present anteriorly a concave outline. This is not produced by any absorption or destruction of the bodies of the vertebra anteriorly, but is evidently caused by the very remarkable degree of rotation above described; by which the natural anterior convexity in this region, is made to

assume a lateral position, as if the spinal column had been laterally twisted on its vertical axis, the centre of motion being fixed at the apices of the spinous processes.

A vertical section, from side to side, through the bodies of the vertebræ, exhibits the following appearances. There are no indications of any destructive disease, such as caries or necrosis, having existed in any of the vertebræ. The cancellous structure appears to be healthy in all parts. The chief alteration in the bones, is a diminution in thickness of the bodies of the vertebræ in the concavity of the larger curve, the result of absorption from unequal pressure; this chiefly affects the bodies of the second and third lumbar vertebræ, each of which is diminished a quarter of an inch on the right or concave side: these vertebræ each measure one and a quarter inch in thickness on the convex, and one on the concave side of the curve. The wedge-shaped form thus given, to a certain extent, is less than might have been expected from the severity of the curve externally.

The intervertebral substances between the bodies of the and first and second, and of the second and third lumbar vertebræ, have been, to a considerable extent, absorbed in the concavity of the curve; these cartilages each measure five eighths of an inch on the convex, and less than a quarter of an inch on the concave side of the curve; this, also, is evidently the result of unequal pressure; there are no indications of ulceration having existed.

It is therefore obvious, that the lateral curvature is chiefly dependent upon absorption of the intervertebral cartilages. The intervertebral substance between the third and fourth lumbar vertebra, is uniformly diminished in thickness to a quarter of an inch through its central portion, but expanded at each side, where it has been free from pressure, in consequence of a certain amount of lateral sliding, or displacement of the body of the third vertebra from the fourth; the lower border of the third vertebra, three eighths of an inch towards the left or convex side; and on the opposite side

has receded, as it were, from the edge of the fourth vertebra to a like extent. The body of the fourth lumbar vertebra, by a similar movement of lateral displacement, also projects beyond the body of the fifth vertebra three eighths of an inch to the left side.

The intervertebral substances between the fourth and fifth lumbar vertebræ, and between the fifth vertebra and the sacrum, are diminished in thickness, in an opposite direction, to those between the second and third, and the third and fourth lumbar vertebræ. The cartilage between the fourth and fifth vertebræ measures rather less than a quarter of an inch on the left side, and rather more than three eighths of an inch on the right side; so that it is diminished a quarter of an inch on the left side. The cartilage between the fifth vertebra and the sacrum is diminished in the same direction, but to a somewhat less extent. The bodies of the fourth and fifth vertebræ are not diminished in thickness on either side; they both measure fiveeighths of an inch in thickness in all parts. The wedge-like form of the last two intervertebral cartilages described will be seen to produce a curvature to the right side, the arc of which would include the bodies of the fourth and fifth lumbar vertebræ and the first bone of the sacrum.

As minor alterations in the osseous structures, indicating a reparative process, may be mentioned a considerable increase of thickness and density of the compact structure forming the outer surface of the bodies of the vertebræ in the concavity of the curve, and also of the adjacent portion of the cancellous tissue similar to the thickening of the walls of the long bones in the concavities of the curves following rickets in early life, and no doubt answering a similar purpose of buttress-like support. The superior and inferior margins of the bodies of the vertebræ are also enlarged so as to form projecting lip-like processes.

It was not considered advisable to lay open the spinal canal for the purpose of examining the condition of the cord, though such a proceeding might appear to be necessary to the explanation of some of the symptoms in this case. The section for this purpose could not have been made without totally destroying the specimen as one of deformity, and in this respect it presented so many features of interest and practical importance, that their preservation was considered to outweigh the chances of discovering any morbid changes in the spinal cord.

The fact of the greatest practical importance which this specimen illustrates and clearly proves, is one which I believe has not hitherto been described, viz., that a very severe degree of lateral curvature of the spine with transverse rotation of the bodies of the vertebræ, accompanied with lateral absorption of the bones and intervertebral cartilages to a considerable extent, and attended with all the distressing symptoms of the most aggravated form of this affection, may exist, with only a very slight lateral deviation of the apices of the spinous processes; in short, that the severest degree of deformity of the spine may exist internally, without the usual indications in respect of the deviation of the spinous processes externally.

When it is borne in mind that all surgeons are in the habit of relying upon the relative position of the apices of the spinous processes to the median line, as an index to the existence or non-existence of lateral curvature, the importance of the fact above described cannot be over-estimated in the diagnosis of this affection. In this particular case it does not appear that any of the very eminent physicians and surgeons who examined Dr. Mantell suspected the existence of lateral curvature of the spine; the general opinion seems to have been that destructive disease existed either in the bodies of the vertebrae or intervertebral substances and was accompanied by lumbar abseess, which one surgeon proposed to open. The fact, however, that the supposed lumbar abseess made no progress after the lapse of a considerable time, from one to two years, but on the contrary rather diminished, threw considerable doubt and obscurity over the case; still in the absence of the great diagnostic symptom of lateral curvature of the spine, viz., lateral deviation of the apices of the spinous processes, this

affection was not suspected; and it does not appear that the hard nodules felt in the lumbar region, and once supposed to be the lobules of a tumour connected with the bodies of the vertebræ, were at any time recognised as the transverse processes of the vertebræ. This can hardly be matter of surprise, when it is remembered that it was the only positive symptom, taken in conjunction with the general aspect and inclination of the body, by which the affection could have been diagnosed, and up to the present time such a condition has not been described as diagnostic by any authority on curvature of the spine. A careful study of the present case will, however, enable us to diagnose a similar condition in alike case, with as much certainty as if the ordinary indications were present.

The condition of the spine here described as transverse rotation of the vertebræ, the centre of motion corresponding to the apices of the spinous processes, I do not find mentioned by any modern authority on these affections; but it appears to have been observed by the late Dr. Dods, of Bath, who, so far as I know, was the first to direct the attention of the profession to the subject of rotation of the spine in lateral curvature. In the year 1824, he published a somewhat remarkable work, entitled, 'Pathological Observations on the Rotated or Contorted Spine, commonly called, Lateral Curvature.'

The author endeavoured to show, that the condition generally described as lateral curvature, was really one of transverse rotation of the vertebral column, the natural flexures of which were by this movement brought more or less into view posteriorly instead of laterally; that, in fact, as an object becomes changed in its appearance from change of position, or by varying the point of sight, so an altered position, the result of rotation of the spinal column, produces the deceptive appearance of lateral curvature. At page 98, he observes, "It does not happen in all cases of contorted spine that the whole column is moved round; if it were so, we should have invariably the profile of its three flexures brought into view in the manner described, whereas,

XXXVII. 12

it is well known that there are frequently but two of them observed." At page 23, he remarks, "As the spine is rotated spirally, and not as upon a pivot, the profile of its flexures will be imperfect." Dr. Dods appears to have been led to the existence of rotation by observing what was really the most positive symptom in the case now under consideration, viz., the prominence of the transverse processes in the left lumbar region. He states, page 101, "During the course of my operations (alluding to friction, &c.,) upon several patients, I was struck in all of them, (for they were all contracted to the right side,) with a considerable bony hardness and projection on the left side of the loins, raised nearly to a level with the spinous processes; and this I found to be the case in the patients whose spine exhibited little or no apparent curvature in the loins, as well as in those in whom the apparent curvature was very great." After the muscles had been relaxed by friction, Dr. Dods was enabled to satisfy himself that the bony prominences were produced by the transverse processes of the lumbar vertebræ, which could be distinctly felt and counted like the spinous processes. In these cases the transverse processes of the same vertebræ on the opposite side could not be felt, and appeared to have sunk inwards completely out of reach. Reasoning upon these facts, and considering that a direct lateral curvature of the column could only affect the transverse processes by separating them on one side, and approximating them on the other, without altering their transversity with respect to the body, Dr. Dods concluded that such a condition could only be produced by a movement of transverse rotation. He also traced a similar condition in the dorsal region, evidenced by the oblique position of the spinous processes, also described in Dr. Mantill's case, and considers the rotation sometimes to extend to the cervical region.

From the above observations, it would appear that Dr. Dods had met with and recognised the precise conditions now described in the specimen under consideration; for he specially mentions the fact, in some cases, of the transverse

processes rising to the level of the spinous processes in the lumbar region, with "little or no apparent curvature in the loins;" and we have thought the evidence of this fact of sufficient importance to justify his views being brought under the notice of this Society. They are evidently the result of careful and original observation, though the explanation of the phenomena observed, their mode of production, and the indications for, and methods of treatment given, are in many respects erroneous, like the great majority of pathological doctrines tested by the experience of thirty years' scientific inquiry; it would, however, be out of place to advert to these points in the present communication.

In the cases alluded to by Dr. Dods, his attention was probably directed to the existence of rotation in the lumbar vertebræ by prominence of one of the shoulders, and other points of defective symmetry which may or may not have existed in Dr. Mantell during life, though not obvious after By some it has been remarked, that "he looked as if he suffered from curvature of the spine." There is no account, however, of any examination having been made with special reference to this point. From an observation made by Sir B. Brodie, in a clinical lecture delivered by him in Dec., 1846, and published in the 'London Medical Gazette,' it would appear that M. Guérin was familiar with the appearances described in the specimen exhibited. Sir B. Brodie observes, "At a very early period, and even before the lateral curvature is very distinct posteriorly, the bodies of the vertebræ are actually twisted to one side. This curious circumstance was pointed out to me by M. Guérin, who has some preparations, in which the fact is very perceptible." In M. Guérin's first memoir, 'On the Treatment of the Deviations of the Spine by Section of the Muscles of the Back,' published in 1813, page 18, he alludes to the modifications of form dependent upon the double influence of vertical displacement caused by lateral flexion, and of horizontal displacement caused by torsion. He was evidently aware of the existence of rotation, but he does not allude to it as at any time coexisting with an absence of lateral deviation of the apices of the spinous processes, as in the present instance, and therefore it is not mentioned in its most important practical bearing upon the diagnosis of lateral curvature. He had probably noticed what may now be described as the disproportion between the internal and external curvatures, also a most important fact, and one of frequent, if not constant occurrence, in all the more severe forms of lateral curvature of the spine.

Rotation of the vertebræ, or a spirally twisted condition of the vertebral column, as a complication of lateral curvature, is alluded to by many English writers on this affection, but generally only as a passing observation, little or no practical importance being attached to it, and by several of the principal authorities of the present day it is altogether omitted. There can be no doubt, however, of its frequent, if indeed it may not be said, its constant occurrence as a complication of the more severe forms of lateral curvature; and when it exists in any considerable degree, it constitutes one of the chief difficulties of treatment. All the instruments at present so generally used, which make direct lateral pressure on the convexity of the curve, must tend to increase the mischief in such cases, though by their effect in flattening the ribs, this result may not at first sight be apparent.

EXPLANATION OF THE PLATES

Illustrating Mr. Wm. Adams's description of a Case of Distortion of the Spine.

PLATE I.

Anterior view of the Spine of the late Dr. Mantell, vide p. 172.

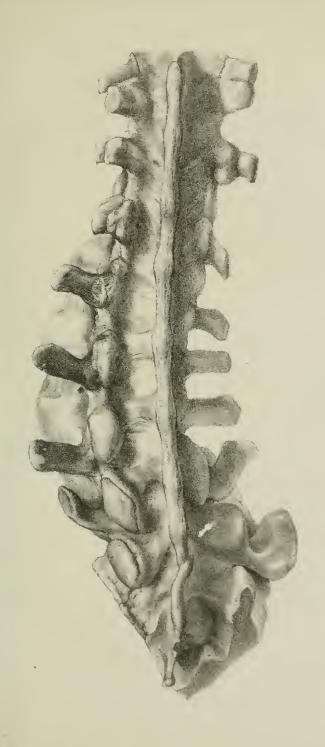
PLATE II.

Posterior view of ditto, vide p. 170.











GOUT AND RHEUMATISM.

THE DIFFERENTIAL DIAGNOSIS, AND THE NATURE OF THE SO-CALLED RHEUMATIC GOUT.

BY

ALFRED BARING GARROD, M.D.,

PROFESSOR OF MATERIA MEDICA, THERAPEUTICS, AND CLINICAL MEDICINE,
AT UNIVERSITY COLLEGE;
PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

Received June 26th.-Read June 27th, 1854.

In this country, there is no one, I believe, whose opinion would be looked upon as an authority, who holds the doctrine of Chomel, that gout and rheumatism are one and the same disease; still there are very many who, allowing the complete separation of these diseases, in their characteristic forms, yet entertain an idea that one disease is able to merge into the other; and that a morbid condition to which the name of rheumatic gout has been given, is not uncommonly produced—a condition whose name is familiar both to the profession and the public, but of which it is difficult to find a precise description.

Can one disease merge into the other? Can rubeola become scarlatina, or scarlatina rubeola? Doubtless it is not unfrequently difficult to diagnose certain cases of either of these diseases, at any rate, simply from the present condition of the patient; it is not, however, customary to designate such cases by the compound name of rubeoloscarlatina, or scarlatino-rubeola; for we feel confident that each of these diseases is produced by a special poison, and has its own special pathology, although the symptoms produced by one may occasionally simulate those of the other. It may be possible, but it is certainly extremely uncommon,

182 on gout

for a patient to suffer from the two affections simultaneously: to such a case the compound name above mentioned might be appropriate. So, also, it may be asked, can rheumatism merge into gout, or vice versâ? Has not each of these affections also its own special pathology, and is not the name of rheumatic gout, as generally applied, simply a cover for our want of knowledge of the precise affection under which any given patient may be labouring? I would not for a moment be thought to deny the possibility of a gouty patient becoming affected with rheumatism; but I have no hesitation in affirming, as the result of long experience and attention to the subject, that the disease is extremely uncommon, and that the cases ordinarily designated by that name are not those in which such a double disease is present.

The subject of the diagnosis of these masked cases, is, I consider, one of very great importance—important both as to the prognosis and especially to treatment; it is also a subject of no small difficulty.

To diagnose acute gout, when it occurs for the first time in a rich man, of middle age, and affecting the ball of the great toe only, preceded by dyspeptic symptoms, and accompanied by turgescent veins and ædema of the inflamed part, is a matter of the greatest ease; so, also, to diagnose acute rheumatism in a poor girl, with most of the larger joints inflamed, together with the endo- or pericardium, preceded by rigors, and not accompanied with ædema of the affected joints, is one of no great difficulty, even to a tyro in medicine; but the case becomes altered when either gout or rheumatism has never been very decidedly marked, or when, from repeated attacks, the symptoms have lost all their pristine characteristics.

To clear away the difficulties in making such a diagnosis, to enable the two diseases to be separated when they assume their masked forms, and to show the impossibility of the frequent occurrence of a disease which can correctly be called "rheumatic gout," is the object which I shall endeayour to accomplish in the present communication.

In a paper published in the Society's Transactions for 1848, entitled "Pathological Condition of the Blood in Gout and Rheumatism, &c.," I threw out the following suggestion with regard to the diagnosis of gout and rheumatism: "Might it not, in doubtful cases, be possible to determine the nature of the affection from an examination of the blood?" At that time, the amount of evidence on this point which I was enabled to bring forward was very limited, amounting only to four cases of gout, and the same number of rheumatism. Since that period, although I have not made known any further evidence on the subject, from an unwillingness to form conclusions from few or imperfect data, I have by no means been unmindful of the matter, and have lost no opportunity of putting the question to a most searching investigation; the results of which, founded as they are on 177 examinations of the blood, taken from 148 separate patients, will be given in the present paper.

I have avoided referring here to any case of either gout or rheumatism, when the blood has not been examined, although during the time in which these have been accumulating, very many others have come under my care.

The plan adopted for tabulating the patients, has been to divide the cases into four different classes.

- 1. Articular affections, in which was demonstrated the presence of an abnormal amount of uric acid in the blood.
- 2. Articular affections, in which the absence of uric acid in the blood was shown.
- 3. Articular affections, proved to be closely connected with *urethral* affection.
 - 4. Affections non-articular in character.

The examination of the blood for uric acid, was in general performed in the manner described in my paper read before the Society this session, which I named the "Uric Acid Thread or Fibre Experiment," except in certain cases where the acid was separated and weighed, and the results of which are detailed: the history, symptoms, &c., of each patient are taken chiefly from my Hospital Case-Books, during the time I have been attached to the Institution as

184 ON GOUT

physician; some few have been the results obtained from patients in private practice; but, as must be evident to all, on points connected with the condition of the blood, and requiring accurate investigation, no patients offer the same facilities as those residing for the time in the wards of an hospital.

It will be seen, in referring to the following tables, that the blister fluid has occasionally been analysed as well as the blood; sometimes, but very rarely, in lieu of that fluid, from what I have shown in my last communication to the Society, the condition of the blood may be deduced from that of the blister-serum, when certain precautions are taken.

Table I.—Articular Affections—Uric Acid in Blood.

State of Blood.	Clot firm; serum alkaline; sp. gr. 1029-4 at 68° F; nuch uric acid by thread experiments.	clot slightly buff- nd, cd and contract- feet ed; serum alkaline; s of sp. gr. 1928·0 at rec. 60° F; abundance trd, of uric acid. Blister ed; fluid from inflamed No uric acid. Blister No fluid from abdomen to gave a moderate amount of uric acid.
Symptoms during Attack.	Wm. Fletcher. 38 Gas-fitter, Drank much Father gout Pretty good. Wm. Fletcher. 38 Gas-fitter, Drank much Father gout Pretty good. Occasionally ginand beer, or rheuma- Fractured had not present any seven gout, and all since then mothers affected with had brothers. Also own See below.	Fred. Plant. 43 Painter Drank free. Apparently Good, except and gin. Not from father, ing from and gin. Note of porter when patient was young. The daily often. The decision of porter was young. The decision of porter when bather first attack and and both feet ed; serum alkaline; and ankles, small joints of sp. gr. 1928-0 at hands. Pitting on pressure. 60-P.; abundance to growth in great contract in ankle, form and ankles, small joints of sp. gr. 1928-0 at hands. Pitting on pressure. 60-P.; abundance to growth in ankle, form in ankle, for
Cause of.	Moch drink- ing before present attack.	Noneassign- cd for the present.
No. of Attacks.	Numerous. 4 or 5 well marked.	Numerous. First attack Il years since, first in ankle, next in great
General state of Health.	ather gout Pretty good. rheuma- Fractured sm. Mo-ribs about 6 ter's father years since; out, and all since then mother's affected with brothers. present dis- brother. brother. case.	Good, except when suffer- ing from gout or lead colic.
Hercditary Predisposition.	Father gout Pretty good. or rheuma. Fractured tism. Mo. ribs about 6 ther's father years since; gout, and all since then mother's affected with brother. Present dis- brother. See below.	rank free- Apparently of porter lereditary and gain. Not from father, a great ex- who, how-sas, 6 pints ever, died of porter whenpatient lally often. was young.
Occupation. Habits of Life. Predisposition. Of Incalth. Cause of.	Drank much gin and beer, or porter.	Drank free- Apparently Good, except Numerous. 1y, porter hereditary when suffer- First attack and gin. Not from father, ing from I years in great ex- who, how- gout or lead since, first cess, 6 pints ever, died colic. of porter when patient daily often. was young.
Occupation.	Gas-fitter, occasionally musician. Has never had lead colic	Painter (House.)
Age.	1 88	65
Name.	Vm. Fletcher.	Fred, Plant.

State of Blood.	Uric acid in serum.	Serum; consider- able quantity of uric acid.	Clot firm; buffed and cupped; serum alkaline; sp. gr. 1029° at 55° Ft.; abundance of uric acid. Blisler fluid from inflamed part, no trace of uric acid. Blisler fluid from ankle, a few cystals of uric acid.	Clot normal; serum alkaline; sp. gr. 1026*8 at 50° F. Abundance of uric acid. Blister Auid from chest, a mo-
Symptoms during Attack.	Numerous. Not stated. Affection of hands, ankles, Uric first attack horses, hips. Pulse 80, serum. Deposits in ears; and little nodules in integuments near nome part eyes.	Wm. Finch. 40 Wine-cooper Has drunk Father and Pretty good. Numerous. Patient had commenced in knee, Serum; considerately of grandfather becrand gin. on same side and grouph of father had gout, and sme side and grandfather since in feet attacks by on pressure. Pulse 76 and ankles, the use of chalkstones.	Both feet, knees, hips, Clot firm; buffed small joints in hands, and and cupped; serum in great toe. Pitting on alkaline; sp. gr. pressure. Pulse 80. No 1029'0 at 55° F; thirst. Minnte concretions abundance of uric of urate of soda in left ear. acid. Blister fluid Large semi fluid collection from inflamed part, in left foot of creamy urate no trace of uric of soda; some also on right acid. Blister fluid little finger.	tack. First Struck by injury, in left clow and rum alkaline; sp. 14 year shaft; and fingers; afterwards both gr. 1026°8 at 50°F. since, com-fracture of feet and right knee, and Abundance of uric menced in right index finger. Pitting acid. Biskey fluid left foot.
Cause of.	Not stated.	Patient had often brought on attacks by the use of port wine.	None assigned.	Injury. Struck by shaft; and fracture of ribs, and pleuritis.
Occupation, Habits of Life, Predigary General state No. of Attacks.	Numerous. First attack occurred 20 years since in some part of foot.	Numerous. First about 10 years since in feet and ankles.	Not known; numerous. About 10 years since had first attack, con- fined to foot.	Temperate; See under, Pretty good, Second at- about 2 pints W. Fletcher, except from tack. First of porter the brother present adaily; for of the disease, since, commorly took present one, merly took present one.
General state of Health.	Good.	Pretty good.	Good, in general.	Comperate; See under, Pretty good, Second atbout 2 pints W. Fletcher, except from tack. First of porter the brother present 14 year alay; for of the disease, since, commerly took present one.
Hereditary Predisposition.	64 Stonemason. Not stated. Not stated.	freely of grandfather beerand gin. on same side hadgout, and father had chalk stones.	Ilas drunk Father's very freely, brother had shiefly porter; some gin.	Temperate; See under, bont 2 pints W. Fletcher. of porter the brother daily; for- of the merly took present one, pirits also.
Habits of Life.	Not stated.	Has drunk freely of becrandgin.	lias drunk very freely, chiefly por- ter; some gin.	Temperate; about 2 pints of porter daily; for- merly took spirits also.
Occupation.	Stonemason.	Wine-cooper	Chas. Farr. 38 Brewer's Man.	Painter,
Age.	9	0+	88	1.33
Name.	Jos. Elliot.	Wm. Finch.	Chas. Farr.	Chas, Fetcher, 35

Tongue furred; thirst, derate amount of Fluid from right index fin- uric acid. ger (middle joint) obtained by puncture; milky from urate of soda (4 days after it was inflamed); concretions aftered speared on right ear, and in left middle fuger. Has had nu- Injury from About 48 hours after clot slightly merous at- kick of horse injury. Dorsum of right buffed; serum alkatackin feet hand and foot, and left line; sp. gr. 1026·64 elbow, upon which he fell. at 58° F. A good 7 or 8 years Piting on pressure. Pulse sprinkling of uric 80, full, hard; some thirst; acid on thread. For a years appetite good. No deposits of uric good urates.	Ankles and feet chiefly Clot normal; se- affected. Pitting freely on runn alkaline; sp. pressure. One knee alsogr. 1029 6 at 47° F. much swollen; a tongue Abundance of uric clean; appetite good; no acid by thread ex- thirst. Pulse 76, not re-periment. of soda on both ears.
njury from cick of horse; leaves, leav	Drink.
Has had nu- Imerous at- ktacks. First attackin feet 7 or 8 years since; does not remember whether	was chiefly affected. Great toes have been specially affected in some attacks. Numerous. First about 14 years since, in right great toe.
Good.	Good,except gouty.
las always Father had een a free gout, also drinker— one brother. eerand gin.	Father had gout, also brothers.
Has always Father had been a free gout, also drinker—one brother.	Publican for Intemperate Father had many years, Drank much gout, also formerly a beer and gin. hrothers. post-boy. Good diet.
Farrier.	John Howel, 45 Publican for Intemperate Father had Good, except many years, Drank much gout, also formerly a beer and gin. Inothers. post-boy. Good diet.
46	45 45
Thos. Bugg. 54	John Howel.

State of Blood.	Clot normal; serum alkaline; sp. gr. 1026-0 at 65° F.; considerablesprinkling of uric acid on thread.	Clot normal; serum alkaline; sp. gr. 1028 0 at 60° F. A few crystals of uric acid. Blister fluid gave crystals of uric acid. Blister fluid from inflamed knee no crystals of uric acid. Second bleeding 2 days after: Clot not buffed or eupped; serum alkaline; sp. gr. 1027-1 at 65° F. Pretty good quantificial bleeding 8 m; fibrinous coat; at amount of uric dexperiment.
Symptoms during Attack.	Great toes both affected; Clot normal; seleft knee slightly; patient rum alkaline; sp. has eezema of both legs; gr. 1026·0 at 65°F; rather chronic. Pulse 92. considerablesprink-Appetite good. No de-ling of uric acid on posits of urate of soda.	knee, hip, shoulders, hands, rum alkaline; sp. left knee, halls of both gr. 1028 0 at 60°F. great toes. Pulse 110, A few crystals of rather hard; tongue white, uric acid. Bissler furred. Pitting on pres. Jusid gave crystals sure. No deposits of urate of uric acid. Bissler of soda on any part of fusid from inflamed body. I when the control of the control of great from inflamed beding. Second bleeding 2 days after: Clot not buffed or cupped; serum alkaline; sp. gr. 1027-1 at 65° F. Pretty good quantity of uric acid. Third bleeding 8 days after: Clot firm; fibrinous coat; serum gave a moderate amount of uric acid by uric acid thread experiment.
Cause of.	Not given.	Not as-
Occupation. Habits of Life, Predisposition. of Health.	Regular. Not known. Pretty good. About the Not given. (Patient very deaf pall of left great toe, next in right great toe, afterwards in large in large in large.	About 3d at- tack. About 20 years since, swel- ling of bare to at- commenced also in great to c.
General state of Health.	Pretty good.	Cood.
Hereditary Predisposition.	Not known. (Patient very deaf indeed.)	Jived freely, None to both in meat gout or and drink. rheumatism.
Habits of Life.	Regular.	Stableman, Lived freely, formerly a both in meat soldier. and drink.
Occupation.	Wheel- wright.	Stableman, formerly a soldier.
Age.	89	φ +
Name.	Sam. Norton. 68	J. Z. Rumsey. 18 Stableman, Lived freely, None to formerly a both in meat gout or soldier. and drink, rheumatism

Serum gave abundance of uric acid.	Clot buffed, frm; serum alkaline; sp. serum alkaline; sp. Pretty good sprink-ling of uric acid by thread experiment.	First examination: Clot normal; serum alkaline; sp. A good quantity of pric acid; thread studded with crys- tals. Second examina-
About 6th Was exposed Commenced in right Serum gave abunatack. First much to cold foot, then left foot, right dance of uric acid. In the con-before pre-knee, and hand; left shoulned to right sent attack con-before pressure. Pulse 108, hard; pressure. Pulse 108, hard; tongue white, furred. No deposits of urates.	Affection of left elbow, Clot buffed, firm; wrist, and metacarpal joint serum alkaline; sp. of index finger. No de. gr. 1025-56 at 64° F. posits of urates. Pulse 86; Pretty good sprink-tongue furred; no appelling of uric acid by tite. Pitting on pressure. thread experiment.	Lived well; None known Good, ex. First attack Present at- drank mo- to gout or cept occa- of goutabout tack cameon blood some little time be. Clot normal; sederately of rheumatism. sional gout, 20 years after chest fore the joints became af-rum alkaline; sp. some gin. some albu- some albu- minuria. Retroit the joints became af-rum alkaline; sp. after chest fore the joints became af-rum alkaline; sp. after chest form sudjection. feeted. Patient then suf-gr. 1021.6 at 660 It. some albu- minuria.
Was exposed much to cold before pre- sent attack.	None as- signed.	Present at- tack cameon after chest affection.
About 6th attack. First attack confined to right great toe, 10 years since. Other joints afferwards affected.	Sira 22 and Education Education	First attack of goutabout 20 years since.
Good.		Good, ex- cept occa- sional gout, and latterly some albu- minuria.
Not known.	No gout or Good, ex- rheumatism cept gout. from father or mother; but uncles and aunts on both sides subject to gout.	drank mo- derately of rheumatism. sional gout, beer and some gin. some albu- minuria.
Temperate, but has drank much porter; ½ gallon or more per diem.		Lived well; drank mo- derately of beer and some gin.
Traveller.	Cab-driver and proprietor.	Pianoforte. maker.
Geo. Hugget. 56 [Traveller. Temperate, Not known. but has drank much porter; ½ gallon or more per diem.	George Hull, 52 Cab-driver and proprietor.	Jn. Steedman, 61 Pianoforte. Lived well; None known Good, ex-First attack Present atdrank moderately of rheumatism, sional gout, 20 years after chest and some gin.

State of Blood.	tion: Clot normal; serum alkaline; sp. gr. 1022:4 at 66° F. A very few crystals of uric acid.	First examination: Clot firm, buffed; serum; sp. gr. 1026.0 at 66.0 F. No uric acid found by thread experiment. Second examina- tion: Clot normal; serum alkaline; sp. gr. 1024.8 at 65.0 F. A moderate amount of uric acid.	Clot buffed, firm; serum clear, alka-
Symptoms during Attack.	the rightgreat toe and knee tion: Clot normal; were affected. Pitting on serum alkaline; sp. pressure. Had albuminuria, gr. 1022-4 at 66° F. gradually lessening to a A very few crystals mere trace.	Commenced 13 weeks First examination: before admission; partially clot firm, buffed, recovered; for 3 weeks has serum; sp. gr. kupt his bed. Hands, 1026.0 at 66.7 F. knuckles, knees and feet; No uric acid found shoulders. Pulse 72, full, by thread experimard. No deposits of urate ment. Second examination of the blood wastion: Clot normal; made during febrile dis-serum alkaline; sp. turbance of the system; gr. 1024.8 at 65.9F. the second when the pa-A moderate amount tient had pain in joints, of uric acid.	4th attack. Appears to Dorsum of left wrist, Clot buffed, firm; First com- have had hand, metacarpal and seve-serum clear, alka-
Cause of.		signed.	Appears to have had
No. of Attacks.		Numerous. First attack about 20 years since inrightgreat toe and in- step only. Second at- tack 16 years since in same part. Third, 12 years since in new great toe. In sub- sequent at- tacks knees and elbows. Attacks gra- dually in- creasing in frequency.	4th attack. Appears to First com- have had
General state of Health.		Good, except Sumerous. subject to First attack attacks like about 20 the present years since in right great to and insame part. Third, 12 years since in same part. Third, 12 years since in left great toe. In subsequent attacks knees and elbows. Attacks gradululy increasing in frequency.	Good.
Occupation. Habits of Life Predisposition of Health.		Coachman Has drunk Noneto gout Good, except Numerous until 3 years, freely of a cabman. Theumatism, attacks like about 20 a cabman. a cabman. Theumatism, attacks like about 20 the present years since one. Inright greet to and in step only. Second at tack 16 years since in same part of the present of the present of the same part of the present of the present of the same part of the present of the present of the same part of the present o	None
Habits of Life.		freely of beerand gin.	Drinks freely.
		Coachman Has drunk until 3 years, freely of since which beer and gu a cabman.	Excavator.
Age.		9	09_
Name.		Chas. Heath. 46 Coachman Has drunk Noneto gout Good, except Numerous. until 3 years, freely of acabman. a tacks like about 20 the present years since one. in right great to and in-step only. Second at tack 16 years since in same part Third, 12 years since in left great gr	Jas. Bunyon. 60 Excavator.

right great every one or swelling of right side of experiment gave toe. toe. Pitting of parts on abundance of uric pressure. Pulse 72. No acid. deposits of urate of soda in	any part of body. Pains of fingers, wrist, elbow, and shoulder of left uric acid thread ex- side; then same on right periment uric acid side; left great toe, right on thread; serum knee. Pulse 104, rather of blood from loins full and sharp. Some thirst, by cupping gave	Jas. Quinland. 58 Has been Drank very None dis- for a long freely of tinctly dis- time brew- man. Drank very None dis- for a long freely of tinctly dis- man. Drank very None dis- for a long freely of tinctly dis- man. The pretty good Numerous. Drink brings Left hand and arm, and clear, alka- time brew- beerand gin. coverable. few years. The pretty good Numerous. Drink brings Left hand and arm, and clear, alka- time brew- beerand gin. coverable. few years. The pretty good Numerous. Drink brings Left hand and arm, and clear, alka- time brew- beerand gin. coverable. few years. The pretty good Numerous. Drink brings Left hand and arm, and clear, alka- time brew- time brew- perand gin. coverable. few years. The pretty good Numerous Drink brings Left hand and arm, alka- time brew- perand gin. coverable. few years. The pretty good Numerous Drink brings Left hand and arm, alka- time brew- perand gin. coverable. few years. The pretty good Left hand and arm, alka- time brew- perand gin. coverable. few years. The pretty good Left hand and arm, alka- time brew- perand gin. coverable. few years. The pretty good Left hand and arm, alka- time brew- perand gin. coverable. few years. The pretty good Left hand and arm, alka- time brew- perand gin. coverable. few years. The pretty good Left hand and arm, alka- time brew- perand gin. coverable. few years. The pretty good Left hand and arm, alka- time brew- perand gin. coverable. few years. The pretty good Left hand and arm, alka- time brew- perand gin. coverable. few years.	Tradesman. Drank free. Not known. Good, until Very nume. The present Present attack chiefly in Blood by cupping gout appared. Brought op hands. Tradesman. Drank free. Not known. Good, until Very nume. The present attack chiefly in Blood by cupping ed to be head, &c. Many of the firm; serum clear; hrought on smaller joints of feet and sp. gr. 1029-2 at 70° by mental hands much distorted. No F.; uric acid thread anxiety. distinct deposits of urates. exp. gaveabundance of uric acid.
attacks every one or two years.	Cold. Taking hard beer.	Drink brings on an attack.	The present attack seemed to be brought on by mental anxiety.
menced in right great toe.	Numerous. Not known. Early attacks commenced in great toe.	Numerous.	Very numerous indeed.
	Pretty good, Numerous. except from Not known. Early at- tacks com- menced in great toe.	Pretty good until the last few years.	Good, until gout ap- peared.
to gout or rheumatism.	None dis- covered clearly to gout or rheumatism.	None dis- Pretty good tinctly dis- until the last coverable. few years.	Not known.
	Lived pretty None dis- freely. covered freely. clearly to chiefly. rheumatism	Has been Drank very None dis- Pretty goo froe a long freely of tinetly dis- until the last time brew- beerand gin, coverable. few years, er's dray-man.	Drank free. ly, beer, &c.
	Fr. Westcott, 47 Gentleman's Lived pretty None discharge overed except from Not known, ing hard clearly. Covered except from Not known, ing hard clearly good, beer, chiefly. Chiefly. Takenandism. Cold. Takener. Barly at beer. Inheumatism. Reads complements in the complements of the complemen	Has been for a long time brew- er's dray- man.	Tradesman.
	. 47	1.58	
	r. Westcott	s. Quinland	Mr. Cr.
	E.	Jak	Z

Cause of. Symptoms during Attack. State of Blood.	None as- signed for different times all the joints slightly cupped; seany one of the body acutely in-rum clear, alkaline; attack, flamed, sometimes the floop. F. By uricacid smaller, chiefly affected in thread experiment the attack. There is al-a considerable aways much pitting on presmount of uric acid sure. The pulse, during was obtained, acute attacks, becomes quick and hard. Nodules of urate of soda on both ears; and chalk stones on many parts of body, both upper additional and lower extremities. Sometimes discharges, of this urate, and formation	of abscesses. Blood by eupping from loins; serum clear, alkaline; sp. gr. 1026.0 at 53° F. Uric acid thread cxperiment gave abundance of uric acid.	large; scrum clear, alkaline; sp. gr. 1029-1 at 50° F. By uric acid thread experiment an abundance of uric
No. of Attacks.	Almost in- numerable. 5 First com- menced in right great toe about 20 years since. For some time the disease attacked great toes only.		1
General state of Health.	Good, ex- cept when gouty.		
Hereditary Predisposition.	None to gout or rleumatism known.		
Occupation Habits of Life. Predisposition. of Health.	Eats freely of meat; has gout or drunk pretty rhematism freely of beer. Not intemperate.		
Occupation	Cook.		
Age.	53		
Уашс.	Thomas May. 53 April, 1854.	Feb., 1850.	

	ALLY DE AVAILABLE TO MAKE	100
Clot not buffed, notvery firm; serum alkaline; sp. gr. f 1027-4 at 63° F. s A moderate amount s of uric acid.	March, 1853.— , Acute attack; clot-cupped and huffed; serun alkaline; sp. gr. 1026'-4 at 51° F. Abundance of uric acid, shown by uric acid, shown by uric acid, thread experiment. July, 1852.— Acute attack; clot firm, buffed; serun alkaline; sp. gr. 1026. Gave uric acid in abundance on thread. Jan. 1851Acute attack. Abundance of uric acid in blood.	Blood serum con- trains abundance of uric acid.
About 6; has had joint affec- tion without Symptoms, subjective only, not very firm; serum Appetite good. No thirst, alkaline; sp. gr. fever. About 8 years pains in joints, and stiffness A moderate amount since had a joint affec-in walking, which he has of uric acid. Ike acute rheu-lad several months.	Good until Wery numer. Notassigned attacks ince. 14 years rous. First for any one entjointsarechiefly affected, Acute attack; clot attack. sometimes nearly all to-cupped and buffed; gether. Great toes, and serum alkaline; sp. smaller joints of fingers, as gr. 1026/4 at 51° F. well as large joints. Pair-Abundance of urice attack; clot atter, great a year after, great toe also. Upperextrenot been aftered for mitics have not been aftered for more than 6 roorer fions not more than 3 more than 4	Numerous. Not assign. Present attack affects Blood scrum confirst attack.cd. Attack chiefly joints of hands; but tains abundance of about 3 or 4 clearly in. knees and feet stiff and uric acid. years since, duced by painful. Concretions in ears in feet. and around some joints.
out 8 years 1 joint affec- acute rheu-	Notassigned for any one attack.	Not assign- cd. Attack clearly in- duced by drink.
About 6; has had joint affection without fever. Abou since had a tion, like 8 matism.	Very numerous. First attacked right great too, about 12 years since. Second attack a year after, great too also. Upperextremities have not been affected for more than 6 years, and the concretions not more than 3	Numerous. First attack about 3 or 4 years since, in feet.
Good before present af- fection.	Good until 14 years since.	Good until he had painter's colic.
George Roos. 31 Cabman for Drinks free- None to Good before About 6; many years. 1y of beer, goutorrheu- present af- has had some spirits. matism. fection. tion withou fever. Ab since had tion, like had been about 0;	Before hav- ing gout, known; but frank rather one younger freely, of gin, brother has some beer; fived well.	Painter. Irregular. Noneknown Good until he had painter's colic.
Drinks free- None to ly of beer, gout orrheu some spirits. matism.	Before having gout, drank rather freely.of gin, some beer; ived well.	Irregular.
Cabman for many years.	Printer.	Painter.
31	22	0:0
orge Roos.	Wm. Mitchell. 52	i
XXXVII.	T.M.	13
AAA VIII.		10

State of Blood.	Clot large and firm, buffed; serum alkaline; sp. gr. 1027.2 at 60°F. 1000 grs. of serum gave 0.014 grs. of uric acid.	Clot normal; serum alkaline; sp. gr. 10300 at 600° F. 1000 grs. of serum gave of uric acid 0.11 grain.	Clot normal; serum alkaline; sp. gr. 1026·0 at 70° F. Ahundance of uric acid by thread experiment. 2d. Bledeling, attack passed off; clot normal; serum alkaline; sp.
Symptoms during Altack.	Takes beer None known Pretty good. Numerons. A glass of freely, some- times a little rheumatism. gin, but not intemperate. A glass of the manufacturate of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the second of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda in ears only. Gr. 1027-2 at 60°F. intemperate. A glass of the number of soda	Very nume. Any desence of searcely ever free from conversal; searons, had pressing some acute affection in one-rum alkaline; sp. suffered for cause, or or more joints. Concreter, 1030 at 60° E many years, drink, would lons in hands, feet, elbows, 1000 grs. of serum came on indince fresh & casses generally disclarar, or ing more or less creamy toe, ing more or less creamy	None to Pretty good, Third attack Not known. Commenced a midnight, lint the ball of left great toe. runn alkaline; sp. Pulse 100, rather hard, gr. 1026·0 at 70°F. Tongue furred. Appetite Mundance of uric pretty good. Afterwards acid by thread expective years desquanation of skin over periment. 2d.Bleed also for the since. In the ball of toe. No deposits of ing, attack passed urates on any part of body. off; clot normal; serum alkaline; sp.
Cause of.	Numerons. A glass of about 10 induce an about 10 induce an frequent frigue appraise. Over trequent frigue appraises. Not have present in the present history the present is a affected in frist at the f	Any depressing cause, or drink, would induce fresh attack.	Not known.
No. of Attacks.	First attack rum wi about 10 induce years, very attack. O frequent futigue within last peared 5 years. Not have uoticed in hrought history the press which joint was affected in first attack.	Very numerous, had suffered for many years. Came on first in great toe.	Third attack
General state of Health.	Pretty good, except gout.	Good, until first attack of gout.	None to Pretty good, gont or had some rheumatism.injury from poisoned wound, a few years since.
tlereditary Predisposition.	None known to gout or rheumatism.	None known	None to gont or rheumatism.
Rabits of Life.	Takes beer freely, some- times a little gin, but not intemperate.	Coachman Drank pret- in gentle- ty freely at men's fauit one time lies for many chiefly wine.	Regular.
Occupation. Habits of Life. Predisposition. of Health. No. of Attacks.	maker.	52 Coachman Drank pret- None known Good, until Very nume- in gentle- ty freely at men's fauit- one time lies for many chiefly wine. years. Coachman Drank pret- None known Good, until Very nume- pressing first and pressing of gout. Suffered for cause, or numery years. Grink, woult Came on induce fresh first in great attack.	formerly in army.
Age.	<u>01</u>	22	pool with
Хаше	James Tousett, 42 Ginger-beer Takes beer None known Pretty good, Numerous. times a little rheumatism. gin, but not natemperate. intemperate. years, very very sears, very very intemperate. years, very very very very very very very very	W. Butts-worthy.	- Martin.

			.00
Diet good; Father had Repeatedly Numerous. Subject to not intem. gout, bro- had lead For7months perate, but ther suffers colic. Gout has not been drinks beer, also from for 6 or 7 free from	thirst. Appetite good of uric acid by Pulse 95. Much pitting of thread experiment, swellen joints. No de-Blister serum, on posits on any part of body, partial recovery. No permanent distortion of Moderate amount of joints. https://doi.org/10.1007/partial-recovery. No permanent distortion of Moderate amount of moderate amount of mric acid. Second bleeding, clot normal.	Commenced at night, in ball of left great too, then outer side of ankle. Considerable pitting on pressure. Pulse slow. Appetite pretty good. No demonstrate of pressures of pressures of pressures.	Second attack. First attack. Exposed to Commenced in right great toc gave much uricacid in addition. First attack. Exposed to Commenced in right knee rum alkaline; specumenced in right knee rum alkaline; specimon and right wrist; same affecting at work. tion of ball of right great Abundance of urice toc. Pulse 64. No pitting acid. Blister Raid
Subject to draughts.		First attack. Ind much Re-attack night work about 3 ately, had weeks after, been much exposed to cold.	Exposed to changes of temperature at work.
Numerous. For 7 months has not been free from	gout.	First attack. Re-attack about 3 weeks after.	Second attack. First attack.
Repeatedly had lead colic. Gout for 6 or 7	years; com- menced in ball of great toe.	Good.	Good.
Father had gout, brother suffers also from	gout.	Good living; Father af- a consider- feeted with able amount gout. of porter per diem.	Regular. None to gout Diet good; or akes a con-rheumatism. siderable quantity of
Diet good; not intem- perate, but drinks beer.	. •	Good living; a consider- able amount of porter per diem.	Regular. Diet good; takes a con- siderable quantity of
House painter.		Coal porter	Parrier,
32		16	272
William Riley, 32		Wim. Brooker, 46 Coal porter Good living; Father afaconsider- fected with able amount gout. of porter per diem.	John Day.

State of Blood	Souricacid. Small prantity only propured, and that from in landed joint. Clot buffed, serum alcupped; serum alcupped; serum alcupted; serum alcupted; and 499 F. Ahundanee of uric soil by uric acid hussad accommendance both by uric acid	Serum clear; sp. gr. 1027. Abundance of uric acid by thread experiment.	Clot normal; serum alkaline; sp. gr. 1029·2 at 520·P. Thread well sprin. kled with uric acid. A former bleeding gave also much uric.
Symptoms during Attack.	beer, and some gin. Irregular; One grand. Not good Ninth or Attacks Porter and ject to gout. hite affect. menced in great toe. spirits. Some gin. Attacks Attack		Not known. Suffers from Numerous. After an at-Commenced in ball of tack of left great toe, afterwards rum alkaline; sp. books. sema, and emphy-from occasional attacks of great toe. By the 108, sharp Thread well sprintered. Summand attacks on greatly re-No deposits of urates on kled with uric acid greatly re-No deposits of urates on kled with uric acid greatly are seen any part of hody. On A former bleeding of gout.
Cause of.	Attacks brought on distinctly by drink.	Patient thinks ex- posure to wet and cold.	After an attack of bronchitis which it greatly relieved.
No. of Attacks.	Ninth or tenthattack. First com- menced in great toe.	Fifth or Sixth. First, 2 years since, commenced in great toe.	Numerous.
General state of Itcalth.	Not good from fre- from fre- quent syphi- litic affec- tions, and gout and	painter's colic. Good.	Suffers from broughtis and emphysema, and from oceasional attacks of gout.
Hereditary Predisposition.	One grand- father, and father sub- ject to gout.	None to gout or rheumatism.	Not known. Suffers from Not noticed broughtitis in case and emphy books. sema, and from occasional attack of gout.
Occupation. Habus of Life Predisposition. of Itealth.	beer, and some gin. Irregular; has drunk much. Porter and spirits.	Pretty Tegu- None to lar; but gout or drinks freely rheumatism. of gin and beer.	Regular.
	House painter for 10 years, before a plumber.	Bricklayer.	Grocer.
Age.	30	38	5
Name.	J. Channon. 30 Ilouse painter fo 10 years, b fore a plumber	l nyamin Fox. 38 Bricklayer, Pretty Tegular; but drinks freelyrl of gin and beer.	Henry Clubb. 51 Grocer.

-:	peared				
t affection ap-	joint		18.	symptoms.	
just before	acid	dyspeptic acid	from	suffered	

PEMALES

	Commenced in knees, Clot firm, buffed, then ankles, clows, wrists, serum alkaline; sp. and fingers. Pulse 92, rather gr. 1028'0 at 65° F. hard. No denosits of urate A. considerable a.	of soda in body. mount of uric acid by thread experi- ments.		Affecting the left index Clot firm, slightly finger first, then wrist and buffed; serum alka-	shoulders, chiefly small line; sp. gr. 1029 ² oints of right hand; left at 46°F. Much uric	knee and instep. Desqua-acid by uric acid mation of cuticle. No de-thread experiment.	body. from blister. by uric	acid thread experi- ment.	Servant. Regular, hut Mother had Not very First attack. Not assign. Commenced about six Clot cupped and has lived good. ed. weeks ago, in hall of both buffed; serum alka-	great toes, afterwards knec, line; sp. gr. 1026.8 when bled, joint disease at 60° F. A mode-
	None assigned. the	: 5	ter	<u>u</u>	78	<u> </u>	<u> </u>		Not assign-	<u> </u>
r EMANDS.	Father had Good, till Numerous. same joint within last First attack affection in 10 years. about 10 tears and	knees were affected.		Another at-	months afterwards.				First attack.	
an a	Good, till Numerous. within last First attack 10 years. about 10								Not very	Phthisical. Died a few
	Father had same joint affection in	feet. One brother also had joint affection, and white	with crip-						Mother had	chalk stones.
	Eliz. Wells. 51 Laudress; a Regular. Father had Good, till Numerous. same joint within last First attack affection in 10 years. about 10 teness and								Regular, hut	rather hard chalk stones. Phthisical. at times.
	Laudress; a widow.									
	51			:				-	1.53	
	Eliz. Wells.			£					Mart. Johnson, 53	

		State of Blood.		rate amount (small)	of uric acid. Blister	serum alkaline; sp.	gr. 1024.0 at 65° F.	A few crystals of uric	acid. Second bleed-	ing, clot buffed and	cupped; serum alka-	line; sp. gr. 1027-8	at 62° F. A pretty	good sprinkling of	urie acid on thread
	-	symptoms during Attack.		was not at all intense rate amount (small)	Fitting on pressure. No of uric acid. Blister	concretions of urates of serum alkaline; sp.	soua.								
	Cause of														
	Occupation Habits of Life, Predisposition, of Health, No. of Attacks., Cause of										_				
	General state of Health			•					~ _						
	Hereditary Predisposition.		months	afterwards	from chest	discase.									
	Habits of Life.														
	Occupation														
-	Age.							1			-	-			
	12.10														

State of Blood.	Serum of blood con- tined unch uric acid. Serum alkaline; sp. 1.1030-1 at 450 F.	ave much uric acid, by ric acid thread experient.	Sorum gave uric acid rystals on thread. Not umerous.	for thread abundance of nric acid. Bister serum gave inric acid on thread, by nuic acid thread, by nuic acid thread experi-	Clot firm, buffed; serum alkaline; sp. gr. 1028-0 at 659 F. Abun- dance of uric acid by	Blood taken after eath. Serum by uric eid thread experiment ive much uric acid.
Account of Patient.	Gout for many years, Serum of blood con- large joints now chiefly tained unch uric acid. affected. Has had great toe affection. Deposits in both ears; but not elsewhere noticed. A patient who has Serum alkaline; sp.	undoubted goury attacks, Gave much uric acid, by bled on account of re-uric acid thread experitocedence of the affec ment.	Disease diagnosed as Serum gave uric acid true gout, by a phy-erystals on thread. Not sician. Attack disappear, numerous. ing rapidly.	do do do had	body. Painter, Gout of great toe, of 2 days' duration.	Gout, with many Blood taken after concretions in ears, and death. Serum by uric around joints. He died acid thread experiment from fracture of femur. Igave much uric acid.
Sex.	M.	,	zi z	i i	N.	M.
Name.	— Hall.	ş	편 6	C. S.		- Pavier.
State of Blood.	Attack present about Serum alkaline; sp. 3 weeks. Undoubted gr. 1031-0 at 60º F. gouty patient. No con- 1000 grains gave of uric cretions noticed. Acute attack. Chronic Clot firm, not buffed; disease of long standing. serum alkaline; sp. gr. Always relieved by col- 1027-8 at 66º F. 1000 chicum. Concretions in grains gave of uric acid	ars and joints. A patient with gout Serum alkaline; sp. of great toe and foot. gr. 1031-5 at 60° F. 1000 grains gave of uric	acd 0.044 grain. A small quantity of blood taken. Gave a-hundance of crystals of	A painter (wrists and Bernin alkaline; 1000 ands affected), gout grains gave of uric acid r 10 years. Last at 0.05 grain.	Gout. Attack now in Clot firm, buffed; ght hand. Several de-sernin alkaline; sp. gr. sats of urate of soda 1028-2 at 70° F. Abunboth ears. Ædeina of dance of uric acid.	Clot firm, buffed; serum alkaline. Gave much uric acid by uric acid thread experiment.
Account of Patient.	Attack present about Serum alkaline; sp. 3 weeks. Undoubted gr. 1031.0 at 60° F. gouty patient. No con-1000 grains gave of uric eretions noticed. Acute attack. Chronic Clot firm, not buffed; disease of long standing; serum alkaline; sp. gr. Always relieved by col-1027-8 at 66° F. 1000 chicum. Concertions in grains erve of uric acid		Patient with great toe gout.	202	Parit Er	Patient diagnosed to be gout by a physician.
Sex.	M. M.	M.	M.	Ä	H.	N.
Name.	C. Bowers.	U. N—.	- Norton.	Thos. Price.	Thos, Hickson	M. II—.

Table II.—Articular Affections—No Uric Acid in Blood.

State of Blood.	Clot firm, slightly buffed; serum alkaline; sp. gr. 1027-04 at 60° F. No trace of uric acid.	Clot firm; a little cupped; serum alkaline; sp. gravity 10268 at 69° F.	acid. Clot normal; serum alkaline; sp. gr. 1028-0 at 63°F.	Clot buffed; not cupped; serum alkaline; sp. gravity 1028-4 at 55° F. No uric acid.
Symptoms during Attack.	Commenced in knees, af. Clot firm, slightly terwards shoulder, elbow. buffed; serum alka-Skin perspires freely. Pollse line; sp. gr. 1027-04 72. Tougue white, furred; at 60° F. No trace thirst moderate: no appe. of uric acid.	tite. Slight pericarditis; old heart affection. Commenced in feet, then clot firm; a little in knees, wrists, and ankles, cupped; serum al-Pulse 112, full, hard kaline; sp. gravity Tongue furred; no apper 1026'8 at 69° F.	First attack. None, ex. Commenced in knees; Clot normal; secept some then wrists, ankles, and rum alkaline; sp. draught, feet. Pulse 84, harf; gr. 1028-0 at 63° F.	No cardiac affection. Commenced in right Clot buffed; not shoulder, then left; after-cupped; serum alwards right knee. Joints kaline; sp. gravity not very acutely affected, 1028-4 at 55° F. Pules 88, hard; tongue not No uric acid. No heart affection.
Cause of.	Cold.	None assigned.	None, ex- cept some draught.	1
Occupation. Habits of Life Predisposition. of Health. No. of Attacks.	Third at- tack. First about 8 years since.	Pretty good, Second at- tack. First 3 years before.	First attack.	First attack.
General state of Health.	None to Good till Third at- rhenmatism he had tack. First or gout. rheumatism. about 8	Pretty good.	Good.	Good.
Hereditary Predisposition.	None to rheumatism or gout.	ı	None to gout or rheumatism.	Usually not Mother sub- intemperate, jeet to rheu- Lives well, matism; sis- ters and bro- thers not affected.
Habits of Life.	Regular.	Regular.	Regular. Temperate.	Usually not Mother sub- intemperate, ject to rheu- Lives well, matism; sis- ters and bro- thers not affected.
	Cabman.	Linen-dra- per's man.	Carpenter.	Tailor.
Age.	000	33	20	23
Name.	(reo. Jones.	Jackson Jones. 31 Linen-dra-	Wm. Kell. 20 Carpenter.	Thos. Ware. 33

Commenced in hip, then Clot firm; serum left ankle, knees; after-alkaline; sp. gravity wards wrists and hands.1028-8 at 48° F. Pulse 96, hard; tongue No uric acid. forred; thirst; no appetite. No pitting on pressure. Free preparation. No heart affection.	Commenced in left knee Clot normal; seand thigh, then right footrum alkaline; sp. gr. and instep; afterwards right 1029°2 at 51° F. elbow. Pitting on outer No uric acid.—Blisside of foot. Tongue furred. ler fluid. No uric pulse 78. No heart affectacid.	Commenced in right Clotslightly buffed thigh, then knee, back, and cupped; serum shoulders, left clbow, wrist, alkaline; sp. gr. and hand. No pitting of 1030-4 at 4.7° F. dorsum of hand. Pulse 108, No unic acid. 2d. rather hard. Tongue furred; Clot very slight perspiration; thirst. No buffed; serum alkalineart-affection.	Commenced in right Clot little buffed, hand, then feet, knees, firm; serum alkashoulders, and hips and line; sp. gr. 1028-0 ankles, and left hand; also at 52° F. No trace fingers. Pulse 108, hard; of uric acid. tongue furred; thirst; no appetite. No cardiac affection.
Cold.	Cold.	1	1
First attack.	First attack.	First attack.	Second at- tack. First attack 8 years since; many joints affected.
Good.	Good.	None to Not good for First attack. gout or the last few rheumatism. years; scro- fulous knee, &c.	Good till he Second at- had tack. Firs rheumatism. attack 8 years since many joint affected.
None stated,	Lives well; Grand- not intem- perate; father's side drinks beer, affected with and a little rheumatism.	None to gout or rheumatism.	Not stated.
Not given.	Lives well; Grand- not inten- perate; father on perate; father's sid drinks beer, affected wit and a little rheumatisn gin.	Not stated.	Not stated.
Henry Webb, [28] Costermon- Not given. None stated. Good.	Joseph Smith, 57 Carpenter. Lives well; Grand-not intem-father on perate; father's sic drinks beer, affected wit and a little rheumatisn gin.	J. Goodhall. 26 Labourer, lately a pot-man in a public-louse	Jas. Aldrich. 34 Cabman. Not stated. Not stated, Good till he Second attack. First heumatism. attack 8 rheumatism. attack 8 years since many joints
Webb. 28	Smith, 57	dhall. 26	drich. 34
Henry	Joseph	J. G00	Jas. A

Symptoms during Attack. State of Blood.	Commenced in different Clot buffed, cupjoints of lower then upper; ped; serum alkaboth wrists much swollen, line; sp. gr. 1028°0 No heart affection. Pulse at 72° F. No trace 100, hard. Tongue furred; of uric acid.		Commenced with tonsil- Clot firm, slightly litis; after some days right buffed; much cupfoot and ankles, then knees, ped; serum alkathen wrists and shoulders; line; sp. gr. 1026.7 Slight pericarditis. No at 639° F. No trace pitting on pressure. Pulse of urie acid. 120; tongue furred; thirst; no appetite. Perspires freely.	1st. Commenced about Clot not buffed 4 months since, as an at- or enpped; serum tack of acute rheumatism, alkaline; sp. gr. with nearly all joints at 1030° at 60° F. feeted, and some heart at-Notraceof uricacid. (Not in hospital.) Serum of blister 2d. All joints affected as clear, pale-yellow; before; after 8 weeks came sp. gr. 1026° 0 at into hospital, with swelling 60° F. No uric acid. of wrists, and dorsum of hands, and some small joints of fingers, knees ten-
Cause of.			Cold.	Cold.
Occupation. Habits of Life, Predisposition. of Health, No. of Atlacks.	First attack.	FEMALES.	Father had About a year First attack, rheumatism, since had (not acute.) slight hemiplesia, and six years ago paralysis of right side of face.	Pretty good Second at- until lately, tack. First attack com- menced alout 4 months ago. Second at- tack had been ne- glected for many weeks.
Goneral state of Health.	Good.	FEA	Father had About a year leumatism, since had not acute, Silght hemi- plegia, and six years ago paralysis of right side of face.	None to Pretty good Second atgout or until lately, tack. First attack commenced along the second at tack had been neglected for nany weeks.
Hereditary Predisposition.	None to gout or rheumatism.		Father had About a year rheumatism, since had (not acute.) slight hemi plegia, am six years ag paralysis o right side o face.	None to gout or rheumatism.
Habits of Life.	Regular.		Regular.	Regular.
	Carpenter.		Servant.	Dressmaker.
Age.	30		12	32
Name.	Chas. Garlick. 30 Carpenter.		Harriet Miller, 27 Servant.	Ann Mason, 32 Dressmaker.

der and left elbow, shoulder somewhat painful. Pulse 84; not very febrile. Commeuced in shoul- ders, then aukles; after-thread experiment. wards elbows, wrists, knees. No trace of uric No heart affection. Pulse acid.	Commenced in left foot Clot firm, slight and ankle, then right hand, buffed, and cupped; wrist, and fingers; after-serum alkaline; sp. wards knees. Pulse 100, gr. 1028-8 at 60° F.	hard; tongue furred; per-No trace of uric spiration; thirst. No acid. Commenced in knees, Clot buffed, slight. Compared in spirate of the number of the number of the number of the number of the specialty so, 1024-08 at 40° F. Pulse 130, hard; tongue No uric acid.	tion. Endocarditis; pericarditis. Not known; Commenced in knees, Clot firm, slightly perhaps cold then ankles and feet; after-cupped and buffed; washing. shoulders. No heart affee, gr. 1027-6 at 48°F. tion. Pitting on pressure No trace of uric of dorsum of hand. Pulse acid. 109, hard; tongue furred; moderate perspiration; thirst, &c.
Second at- Cold—wet. Commenced in shoul- der somewhat painful. Pulse 84; not very febrile. Commenced in shoul- ders, then ankles; after-threa attack 14 wards elbows, wrists, kuees. No No heart affection. Pulse acid. 105 hard, tonune furred		pard; tongue furred; per-No trace o spiration; thirst. No acid. marked heart affection. Commenced in knees, Clot buffed, then almost all joints of ly cupped; body; left wrist, right knee alkaline; s and ankle especially so. 1024-08 at Pulse 139, hard; tongue No uric acid. furred; much persuira-	Good until First attack. Not known; Commenced in knees, Clot firm, slightly perhaps cold then ankles and feet; after-cupped and buffed, from wards hands, ebows, and serum alkaline; shoulders. No heart aftee. gr. 1027-6 at 489 F. tion. Pitting on pressure No trace of uric of dorsun of hand. Pulse acid. 108, hard; tongue furred; moderate thered; thirst, &c.
Cold—wet.	Not given.	Cold.	Not known; perhaps cold washing.
Second attack. First attack 14 years since, all joints	affected. Second attack. First attack 9 years since.	First attack.	First attack.
Good,	Good.	Good.	Good until lately.
None to rheumatism or gout.	Regular. Not stated.	None to gout or rheumatism.	Mother slightly rheumatic; one brother has had three attacks of rheumatism.
Regular.	Regular.	Regular.	Regular.
Married,	Servant.	Servant.	Married.
40	21	17	56
Elizabeth Ash. 40 Married.	Rebecca King, 21	S. Sturgcon. 17 Servant.	Sar. Southcott. 26 Married.

State of Blood.	Clot firm, cupped, buffed; serum al-kaline; sp. gravity 1031.6 at 69° F. No trace of uric acid.	Clot firm, buffed, rather cupped; serum alkaline; sp. gravity 1029°5 at 60° F. No trace of urie acid by thread experiment.	Clot firm, buffed, rather cupped; serum alkaline; sp. gr. 1024-8 at 60° F. No trace of uric acid.	Clot firm, normal; serum alkaline; sp. gravity 1026-32 at 650 F.
Symptoms during Attack.	Commenced in ankles, Clot firm, enpped, hips, and knees, then in buffed; serum aljoints of upper extremities, kaline; sp. gravity No heart affection. Pulse 1031-6 at 69° F. 116, hard; tongue furred; No trace of uric thirst; no appetite.	Commenced in shoulded, ders, then loins, feet, and rather cupped; sellips. Since admission, and rum alkaline; spacetely inflamed. Pulse 136, 609° F. No trace not full; pain increased at of uric acid by night; much acid perspillerad experiment. Tation; tongue furred; no appetite. Pericarditis with appetite. Pericarditis with	Commenced in hip, then Clot firm, buffed, in knees, left wrist, and rather cupped; sedorsum of hand. Little rum alkaline; sperspiration. Pitting of gr. 1024-8 at 600°F. Albuminuria when admit, acid. Albuminuria when admit, acid. Reri. and endo-carditis. Query if very recent.	Commenced in both and Clot firm, norkles, then both knees, hips, mal; serum alkashoulders, elbows, wrists, line; sp. gravity and hands. No pitting on 1026-32 at 65° F.
Cause of.	Cold and damp.	Cold.	I	Cold.
No. of Attacks.	First attack.	First attack.	First attack. Perhaps one 30 years be- fore, but doubtful. Said to arise from meren- from meren- ment on hands.	First attack.
General state of Health.	Not very good.	Good.	Good.	Not very good. Weak and hysterical.
Occupation. Habits of Life. Predisposition. of Health.	None to gout or rheumatism.	None to rheumatism or gout; or question- able to rheumatism from father.	None to rheumatism or gout.	None to rheumatism or gout.
Habits of Life.	Regular.	Regular.	Regular.	Regular.
Occupation.	Married; a laundress.	Laundress; for 5 weeks in service before.	Cook; widow.	Servant.
'Age	25.	12	30	-
1	Cath. Lockyer, 25 Married; a laundress	M. A. Porter. 25 Laundress; for 5 weeks in service before.	Ann Palkinson 54	Mary Ann Robinson.

First attack. Cold in the Commenced in knees; Clot firm, some-feet. heart early affected; then what buffed; serum hips and shoulders. Tongue alkaline; sp. gr. much furred; much thirst; 1026-65 at 60° F. no appetite. Pulse 110 No trace of uric when admitted. Aortic re-acid. gurgitant in character. Perspiration moderate. Endo-and peri-carditis very	severe. Affection of knees, an- kles, wrists, shoulders, buffed and cupped; Moderate perspiration, serum alkaline; sp. Pulse 96, moderate, full; gr. 1028·5 at 60° F. tongue brown, furred; No trace of uric thirst; no appetite. Slight acid.	Commenced in knee, Clot firm, buffed, then ankles, hips, shoul-cupped; serum alders, elbows, and dorsum kaline; sp. gravity of hands. No pitting, Pulse 1025·0 at 60° F. 105; tongue furred; thirst; No trace of urie no appetite; perspiration acid.	Commenced in feet, then knees, hips, one wrist, ped; serum alka-shoulder, muscles of one line; sp. gravity side of neek and head; 1029-0 at 50° F:
Cold in the feet.	None as- signed.	Cold and damp.	None as- signed.
First attack.	Third attack,	First attack.	Second at- tack. First at 16 years of age.
Good,	fo rheuma. Pretty good. tism on Subject at father and one time to mother's fainting side. (hysteria?)	o rheuma. For last few tism from years has mother. been in a wo sisters weak state affected. of health.	Good.
None to rheumatism or gout,	Regular. To rheuma-Pretty good. tism on Subject at father and one time to mother's fainting side. (hysteria?)	Regular. To rhenma- For last few First attack. tism from years has mother. been in a Two sisters weak state affected. of health.	Regular. To rheuma- tism fromfa- ther. Onesis- ter affected.
Regular,	Regular.	Regular.	Regular.
Servant.	Married. Ilousehold work.	Married.	Married. Takes in washing.
30	31	27	43
Ann Clarke. 30 Servant.	L. Emherson. 31 Married. Household work.	Eliz. Smith. 27 Married.	Eliza Wiggins, 13

State of Blood.	no trace of uric acid. Clot firm, large, buffed, slightly cup- ped; serum alka- line; sp. gravin, 1026:4 at 55° F;	No trace of uric acid. Clot buffed, cup- ped; serum alka- line; sp. gravity 1028:0 at 63° F.	No trace of uric acid. Clot firm; serum alkaline; sp. gr. 1028*8 at 52° F. No trace of uric acid.	Clot slightly buff- ed; serum alkaline; specific gravity 1030-8 at 57º F.
Symptoms during Attack.	white, furred. Pitting of acid. wrist and hand on pressure. Endocarditis (slight), old probably. Commenced in left hip, coverable. then in ankle and knee; buffed, slightly cupaffer wrists and dorsun of ped; serum alkaland. Pitting on pressure. line; sp. gravity Pulse 108. full and lard: 1026-4 at 559. P.	tongue furred; thirst; no No trace of uric appetite. No heart affection, acid. Commenced in ankles, Clot buffed, cup-afterwards in knees, shoul-ped; serum alkaders, elbows and wrists, line; sp. gravity and joints of hands. Pulse 1028-0 at 63° F.	First attack. Damp resi- Gence; in- sufficient much affected; also dor- lot, no heart affection. Clot firm; scrum dence; in- sufface of limbs, great tocalkaline; sp. gr. sufficient much affected; also dor- lots mo of foot; then hip, right No trace of uric Nursing arm, wrist, hand, &c. No acid.	admitted. lard; tongue furred; thirst. — Commenced with erythe. — Commenced with erythe; ma nodosum, then joint ed; serum alkaline; affection; both hands, el-specific pows, knees, and feet. No 1030-8 at 57° F.
Cause of.	None dis-	Cold.	Damp residence; insufficient clothing.	child when admitted. —
Occupation. Habits of Life Predisposition. of Health.	To gout Veryweakly. First attack. None distron father. Two bro-from father coverable. First attack. Two bro-from father and	one acute rheumatism. To rheuma. Not strong. Fifth attack. tism from mother.	First attack.	Second at- tack. First attack 9 years since;
General state of Health.	Very weakly.	Not strong.	Good.	Regular. None stated, Good, except Second at- rheumatism, tack. First attack 9 years since;
Hereditary Predisposition.	To gout from father. Two bro- thers bad gout, and	one aeute rheumatism. To rheuma- tism from mother.	Jane Shay. 38 Married. Not stated. Notendency Livespoorly, to gout. insufficient Father has food. rheumatism.	None stated.
Habits of Life.	Regular.	Regular,	Not stated. Notendenc Livespoorly, to gout. insufficient Father has food.	Regular.
1	Widow.	Lives at home.	Married.	Servant.
Age,	5.	18	38	25
Name.	Elizabeth Eck. 43	Eliz, Fisher, 18	Jane Shay.	Amel. Ranson, 25 Servant.

Regular. Not stated. Good until First attack. Nursing at lower extremities; then cupped; serum allast confine.	evident No cardiac affection. Pulse 1930'0 at 30° F. exposure, 92; tongue furred; thirst. No uric acid. None Commenced in right Clot buffed, con- known. wrist, then right shoulder, tracted and cup- Slight endocarditis. Pulse ped; serum alka- 116; thirst: norshirstion. line: sn. er. 1030'4	First attack. Not known. Commenced in left wrist, London a Pulse 112, rather hard; serum alkaline; sp. month. perspiration. Some pitting No. trace of uric over dorsum of foot. No acid.
Nursing the tim No ver		Not kno Lived i London month
all joints affected. First attack.	ent hasfelt rry weak. Good. First attack.	First attack.
Good until lately; since last confine-	n n	Good.
Not stated.	Lived pretty None to well; work- gout or ed hard in rheumatism.	None to gout or rheumatism.
Regular.	M. A. Sheen. 22 Servant. Lived pretty None to well; work-gout or ed hard in rheumatism	Regular.
Eliza Wynne. 34 Married.	Servant.	Mary Barry. 16 Servant.
34	22	16
ta Wynne.	A. Sheen.	ıry Barry.
Elia	M.	N

Name. Sex. Account of Patient.	A. B—. — Patient with acute rheumatism and pericarditis.	ave. Ra. G. C.—. M. Sub-acute rheumatism Blister serum; serul of several years' stand-alkaline; sp. gr. 1023-		and Se-	nts uric
State of Blood.	Clot huffed; serialkaline; sp. gr. 1036 at 56° F. Uric a	thread experiments gave no trace of uric acid. Blister serum alkaline; sp. gr. 1024'0 at	acid by uric acid three experiments.	Clot firm, buffed, and somewhat cupped; serving alkaline; sp. gr.	acid thread experiments gave no trace of uric
N. mc. Sex. Account of Patient	N. N.—. M. Acute rheumatism, Clot buffed; serum diagnosed by a phy-alkaline; sp. gr. 1030-0 sician. at 56° F. Uric acid	thread experiments gave no trace of uric acid. M. Patient suffering from Blister serum alkasub-acute rheumatism, line; sp. gr. 1024 0 at	Commenced about 1, 90 ft. yo take of thread ankle, then other joints, experiments. Great toe never affected.	No gout in family. No gout in family. Acute rheumatism, Clot firm, buffed, and diagnosed by a phy-somewhat cupped; session.	
Sex.	×	N.		N.	
me.	-X-	м. с—.		A. K.	

Table III.—Articular Affection connected with Urethral Inflammation.

State of Blood.	M. Joint affection conducted with urchral dis-milky; sp. gr. 1026-8 at charge, large joints. No 529 F. No uric acid by uric acid thread experiment. Bilketor serum; ment. Bilketor serum; and 109-38, st. 539 F.	— Thomas. M. Chronic rheumatic af- Clot slightly buffed fection, possibly syphi-and cupped; serumalkalifec. Large joints af-line; sp. gr. 10280 at fection.	Rheumatic or neural- Clot slightly buffed gie affection of many of and cupped; serum alkathe larger joints. Nolline; sp. gr. 1031-0 at eardiac affection. 659 F. No trace of uric acid by uric acid thread experiment.
Account of Patient.	Joint affection con- nected with urethral dis- charge, large joints. No cardiac affection.	Chronic rheumatic af- fection, possibly syphi- litic. Large joints af- fected. No cardiac af- fection,	Wm. Grand. Grand. Grands affection of many of and cupped; secum alkathe larger joints. Clot slightly buffed secum alkathe larger joints. Nolline; sp. gr. 1031-0 at cardiac affection. G59 F. No trace of uric acid by uric acid thread experiment.
Sex.	M.	Ä.	M.
Name.	— Grant,		
State of Blood.	Clot buffed and cupped; serum alkaline; sp. gr. 1028:2 at 65° F. No trace of uric acid by uric acid thread experiment.	Clot firm, buffed; serum alkaline; sp. gr. 1024-C8 at 74° F. No trace of uric acid by	une acid thread experi- ment. Clot normal; serum alkaline; sp. gr. 1027-2 at 66° F. No trace of uric acid by uric acid thread experiment.
Account of Patient.	M. Joint affection, fol. Clot buffed and cuplowing urethral af-ped; serum alkaline; fection, and afferwards sp. gr. 1028:2 at 65° F. accompanied by it. No trace of uric acid by Much febrile disturb-uric acid thread experiance, and several joints ment.	affected (knees and ankles), iritis afterwards. No heart affection, chronic, Clot firm, buffed; following urethral dis-serum alkaline; sp. gr. charge. No cardiae af. 1024-C8 at 74° F. No fection.	Jos. Diplock. M. Joint affection, con- Clot normal; serum neeted with urethral alkaline; sp. gr. 1027-2 affection. No cardial af-at 66° F. No trace of fection.
Scx.	M.	N.	N.
Name.	F. Neville.	John Connell.	Jos. Diplock.

Table IV.—Non-articular Affections.

Blood serum gave no indication 3 8 8 8 8 8 8 8 8 8	4																															
Albuminuria Blood scrum gave no indication 31 M. Accident, surgical case M. Albuminuria Blood scrum gave no indication 32 F. Surgical patient (Bursitis) 32 F. Surgical patient (Bursitis) 33 F. Surgical patient (Bursitis) 34 M. Albuminuria, 1st blood 35 M. Albuminuria, 1st blood 35 M. Accident, surgical case 36 M. Albuminuria, 1st blood 36 M. Accident, surgical case 37 M. Albuminuria, 1st blood 37 M. Accident, surgical case 38 M. Accident, surgical case 39 M. Accident, surgical case 30 M. Accident and accident case 30 M. Accident and accident case 30 M. Accident case	ie acid.	ave no indication	33	33	**		*	"		*		33	3.9		3.9	"		13	33	11	"	33	23	33	a few crystals	no indication		much uric acid	**		9.9	33
Albuminuria Blood scrum gave no indication 31 M. Accident, surgical case M. Albuminuria Blood scrum gave no indication 32 F. Surgical patient (Bursitis) 32 F. Surgical patient (Bursitis) 33 F. Surgical patient (Bursitis) 34 M. Albuminuria, 1st blood 35 M. Albuminuria, 1st blood 35 M. Accident, surgical case 36 M. Albuminuria, 1st blood 36 M. Accident, surgical case 37 M. Albuminuria, 1st blood 37 M. Accident, surgical case 38 M. Accident, surgical case 39 M. Accident, surgical case 30 M. Accident and accident case 30 M. Accident and accident case 30 M. Accident case	Ur	Blood serum g	**	**	,,	Blister serum	Blood serum	,,	11	**		3.9			:	**	Blister serum	**	Blood scrum		**	Blister serum	Blood serum	**						*	:	:
Mathematical Disease. Cric Acid. No Sex. Mathematical Disease. No Ser. Mathematical Di	Disease.	Accident, surgical case	Surgical patient (Bursitis)	Quartan agne	Jaundice	Conjestive headache		Paraplegia		Hemiplegia	Epilepsy	*	2	Wrist drop	Colic	Peritonitis	Ascites	Anasarca	Renal calculus	Suspected calculus	Diabetes mellitus	After fever	Acute inflam, of the eye	Inflammation of eye	**	Hypertrophy of liver	Disease of spleen	х. х.	х. х.	x x	х. х.	Collapse of cholera
M. Albuminuria Blood serum gave no indication M.	Sex.	M.		E.	M.	M.	<u>F</u> .	M.	N.	c.	M.	N.	N.	N.	M.	Z.	M.	M.	M.	M.	Ŀ.	M.	M.	<u></u>	M.	M.	M.	M.	M.	M.	M.	M.
M. Albuminuria Blood serum gave no indication M.	No.	31	32	33	34	35	36	37	38	39	10	41	42	43	77	15	16	27	48	49	50	51	52	53	54	55	56	57	58	59	09	61
M. Albuminuria M. " R. " M. " M. " M. " M. " M. " M. " Albuminuria, 1st blood — after recovery Acute eccema Eczema impedigenosis F. Bezema impedigenosis F. Bezema impedigenosis F. Acute pleurisy M. Lepra Acute pleurisy M. Lepra M. Pleurisy with effusion F. Acute pleurisy M. Pertinsis M. Phthisis, 1st stage M. Bronchitis M. Bronchitis M. Brhthisis, 1st stage M. Phthisis	Urie Acid.	erum gave no indication		:	:	a moderate amount	a few crystals	, a moderate amount		, considerable ,,	, scarcely a trace	, no indication	60		, ,,	2		***	erum "	erum "	erum "	rum "	3	, a few crystals	, no uric acid	, no indication	, considerable amount		33			
M. Albuminuria M.		Blood se	-	•	-	-				,	ry.		_	_		-	_	-	Blister s	Blood so	Blister s	e) Blood so	•		_	-	-	Blister s	-		-	-
	lisease.	Albuminuria		33	: :			: 2:		Albuminuria, 1st blood	- after recove	Acute eczema	Eczema	Eczema impetigenosis	Psoriasis	:	Lepra	Acnte pleurisy	Pleurisy with offusion	:	Chronic pleurisy		Pneumonia	:	2	Bronchitis	***	Phthisis	Phthisis, 1st stage	Phthisis and broughitis	Phthisis	Emphysema
N	I													_		-	-	-	_	_	-		-									-
		M.	M.	M.	Cr.	M.	M.	rei.	Eri.	M.		c.	ci.	M.	2	N.	Ci.	F.	M.	re:	M.	M.								F		

Table I contains a more or less detailed account of 47 patients suffering from articular disease, in whom the examination of the blood was made, and it will be found that there are many peculiarities both in the history of such patients, and in the symptoms exhibited by them; the most important are as follow:

Sex.—Only two patients out of forty-seven affected with articular disease, whose blood contained an abnormal amount of uric acid, were females.

Age.—The average of the ages of those patients in whom this point was noted, amounting to thirty-two in number, was forty-seven years; this applies to the ages of the patients when in the hospital, and not when first attacked with the disease.

Hereditary predisposition.—In twenty-six cases, it was found that thirteen, or one half, could trace what they called gout to some close blood relation. In patients in hospitals, it is not unfrequently difficult to get very clear accounts of family peculiarities, or hereditary predispositions; in the remainder of the cases, no account of such matters had been noticed.

Habits, &c.—Out of twenty-eight cases where the habits of the patient were particularly given, twenty-one acknowledged themselves to be free livers, and for the most part took largely of malt liquors, either with or without spirits, not uncommonly combined. Seven said they were very temperate, but most of these, which included the two female cases, strongly inherited the articular affection.

Occupation.—The occupation was noted in thirty-three cases; and it is very singular to observe, that eight of these or nearly twenty-five per cent., were painters or plumbers, at any rate had made use of lead in their work, and had been affected with lead disease. Any comment on this point, however, we must defer to a subsequent paper. The occupations of the remaining patients were very miscellaneous:—brewers' men and wine-coopers, gentlemen's servants, cabmen, &c. No one occupation, with the above exception, appeared to have much influence; but in those

212 ON GOUT

in which the patients could readily procure malt liquors, the cases were the most numerous; but this refers more especially to the habits of the individuals.

Exciting Causes of Attack.—The causes to which the patients especially referred the attacks under which they were suffering at the time, were noted in eighteen cases. Many could assign no cause for any given attack. Of these eighteen patients, seven referred it to over-drinking, two to drink combined with fatigue or debility, two to cold, one to cold and debility, two to severe injury; in two, it came on during the course of some chest affection, and in two other cases, after epilepsy. So that over-drinking seems to be by far the most powerful exciting cause; and it is not every patient who will readily acknowledge to this fault, or it is most probable the proportion would have been much greater.

Symptoms, Affection of ball of Great Toe.—In thirty-five cases, the fact as to whether the patient had suffered from any special affection of the ball of the great toe, either in the attack under consideration or any prior one, was particularly dwelt upon; and it was found that, in twenty-nine cases, the great toe affection had been well marked, in two it was absent; in the remaining four, the feet only were affected, and in some of these latter the presence or absence of the special affection of the toe could not be positively asserted. It will be observed that in the first attack this part was more especially selected by the disease.

Edema of affected parts.—Œdema occurring on the subsidence of the inflammation of the affected parts, especially the dorsum of the hands and feet, or where the surface was much affected, was noticed in twenty-four cases to be present. It was never stated to be absent; in many cases, desquamation of cuticle was found—a symptom doubtless intimately connected with the ædema.

Concretions or Tophaceous Deposits, or Chalk Stones.—In thirty-seven cases, the presence or absence of concretions of urate of soda upon the surface, or in such situations as to be undoubtedly recognised, was noted, and they were found

to be present in seventeen patients—absent in twenty. Some points of interest with regard to their locality were also observed. In the above seventeen cases, they occurred in the ears (on the surface of the cartilages) alone, in seven cases; in ears and around joints, &c., in nine; and in one case only could they be recognised in the other parts of the body, without also being present in the ears. Of this peculiar selection of the ear for the deposition of urate of soda, I have seen many examples in private patients, of which I have notes; and I may state, that they fully agree with the results contained in the table. These deposits may vary very greatly both in number and size, from one to eight or ten, and from the size of a small pin's head to a pea; they are beautifully crystalline, and of a consistence varying with the time at which the matter was thrown out. A representation of an ear, pretty freely studded with deposits of urate of soda, will be seen in the annexed drawing; it was made from a patient in No. 1 Table, whose blood was examined, and found to be rich in uric acid.

Acute Heart Affection, Peri- or Endocarditis.—In no one case was recent endo- or pericarditis found. Some had slight old valvular disease.

From a review of the symptoms exhibited by patients in Table I, it is evident that the majority of them are such as no physician would hesitate to affirm to be those of true gout, and in some, whose symptoms were not so striking during the attack under consideration, the history at once gives the clue to the nature of the disease: still there are a few, where no hereditary predisposition could be discovered, who never had the great toe specially affected, who never appeared, from their own statements, to have lived very freely, whose symptoms might, according to the definition of the diseases gout and rheumatism usually given, be referred either to gout or rheumatism, provided that the condition of the blood, or the effects produced upon the disease by remedies, were not taken into consideration; and it is the true nature of such cases that it is the especial object of the present communication to endeavour to elucidate. 214 ON GOUT

Very many patients called the disease under which they were labouring, rheumatic gout, and on questioning them, said that their former medical attendants had so called it: as a rule, however, it was not the really difficult cases which were so named, but those in which the patient had formerly suffered from acute gout, but which disease had, in process of time, merged into a chronic affection. Not unfrequently, these so-called rheumatic gout patients exhibited abundance of chalk-like deposits of urate of soda in different parts of the body. With regard to the amount of uric acid contained in the blood, I think that it bears no direct proportion to the intensity of the local symptoms; often, I believe, an inverse ratio may hold good, as I have reason for suspecting that the local inflammations tend greatly to destroy this body, and therefore, in cases where the joint affection has remained a long time, we should not be surprised to find it greatly diminished. This was evidently the case in the blood taken from the patients Rumsey, Heath, and Rous, in Table I. At first, in Heath's blood it was not detected, but this, probably, was from the too rapid drying of the scrum; it being in summer, and I not then taking all the precautions enjoined in my former communication this session. I hope to recur to this subject at a future time, but I would advise, that in cases of this kind, the serum should be put up in rather large quantities, as from a fluid drachm and half, to two drachms, and allowed to dry carefully and slowly. The presence of other inflammatory disease will probably also tend to lessen the amount of uric acid in the blood, as appeared to be shown in Johnston's case: here, however, the joint affection was by no means of a severe character.

Table II, contains an account of thirty-five cases of articular disease, not connected with urethral affection, and in which no uric acid was found in the blood. On making an analysis of these cases similar to the last, the following facts are eliminated.

Sex.—Out of the thirty-five patients, twenty-one were females, and fourteen males.

Age.—In thirty cases the age was determined, and the average was thirty years; as in Table I, the ages were those of the patients at the time of the attacks for which they were admitted.

Hereditary Predisposition.—In twenty-four cases where an account was obtained as to the existence or non-existence of hereditary predisposition to the disease under which the patients were suffering, it was found, that its existence could be made out in eight cases, its non-existence in fourteen, in two there was considerable doubt.

Habits of Patients.—Of twenty-seven cases, twenty-six considered their mode of life very regular, and that they took no unusual amount of malt liquors, wine, or spirits. In one case the patient had lived freely, and taken a considerable amount of alcoholic fluid.

Occupation.—No peculiarity was observed on this point in any of these patients.

Exciting Causes of Attack.—In eighteen patients, some cause of the attack was ascertained: of these, sixteen referred it to direct exposure to cold, and two to debility. In no case could excess of drink be ascertained to be the exciting cause.

Symptoms, Affection of Great Toc.—In thirty-one cases, where the symptoms of the present and prior attacks were given, thirty had never experienced any great toe affection, in one patient only was it stated to have occurred, and then the plantar surface of foot was also much affected, and during the attack, which was the first, the joints of the upper extremities were inflamed equally with those of the lower.

Œdema of the inflamed parts.—The presence or absence of this symptom was noticed in thirty-one cases. In twenty-seven it was absent, and in four only present to a marked degree.

Concretions of Urate of Soda or Chalk Stones.—Not present in any case examined, though particularly looked for in those in which the symptoms are detailed.

216 ON GOUT

Acute Heart Affection, Peri- or Endocarditis.—In thirtyone cases examined, recent peri- or endocarditis was present in thirteen, and absent in eighteen patients.

As will at once be seen, the majority of these cases were such as physicians would pronounce to be true rheumatism, simply from a consideration of the symptoms: in some, the histories would readily clear up the diagnosis, but, as in Table I, a few remain, where the condition of the blood must be looked for to enable us clearly to refer them either to gout or rheumatism.

The most important results obtained from Tables I and II may be conveniently summed up as follows. In

Articular Affection with Uric Acid Blood.

The average age of patients was .	,		. 47 ye	ars.
The males formed		. al	bout 95.	per cent.
Hereditary predisposition was traced			iu 50·0	,,
Free living and drinking had existed			75.0	1)
Painters or plumbers formed			24.3	>>
Ö			in 39.5	,,
The great toe had been specially affected			82.9	,,
No great toe affection			5.7	"
Doubtful			11.4	"
Œdema noticed			68.5	,,
Deposits of urate of soda			45.9	,,
Acute cardiac affection			none	

In Articular Affections (Non-urethral) with the Absence of Uric Acid in the Blood.

The average age		was 30 years.
The males formed		but 40.0 per cent.
Hereditary affection was traced		in 33·0 ,,
Cold acted as an exciting cause ¹		88.8 ,,
Œdema noticed		12.9 ,,
Acute cardiac affection		41.9 ,,
Deposits of urates of soda .		none.
Great toe especially affected in		none.

¹ And alcoholic fluid did not appear to be either a predisposing or exciting cause.

In Table III will be found the results of the examination of the blood in 6 patients; in whom, although the joint affection simulated very closely true rheumatic disease, yet were separated from the cases in Table II on account of a clear relation being established with urethral inflammation; it was not thought necessary to enter into detail with regard to these; suffice it to say, that the larger joints were generally most affected, that in none was cardiac affection present, and that the febrile disturbance was by no means proportionate to the joint affection, when compared with genuine acute rheumatism, thus separating them from the cases in Table II; and from those in Table I, the want of special great toe affection, and the absence of uric acid in the blood, at once serves to remove them completely.

All the patients in this Table were males.

Table IV gives the results of the examination of the blood from sixty patients suffering from various diseases, and it will be noticed that uric acid was stated to be absent in forty-seven, and present in thirteen. On making an analysis of these thirteen cases, it is found that five were patients suffering from albuminuria, temporary or permanent, a disease which, as I have observed in a former paper, may or may not be accompanied with excess of uric acid in the blood; and the above results fully confirm my former statement, for we also find in Table IV other cases of the same disease where no uric acid was discovered. One was a case of cholera, and during collapse both urea and uric acid are retained in the circulating fluid (I might have given other analyses in this disease, showing this fact, but they have already been brought forward in a paper on the 'Pathological Condition of the Blood in Cholera.') In a specimen of blood from a surgical ward, stated to be from a patient with inflammation of the eye, a trace of uric acid was exhibited by the thread experiment; nothing was known of the case, whether gouty or not: again, a few crystals were seen in a case of a man with pneumonia, and much in one with bronchitis,—with regard to the pneumonic pa218 on gout

tient, it could not be discovered that he had ever had gout, and a very small amount only of the acid was found; the bronchitic man, although nothing is stated in his history as to any hereditary predisposition to gout, yet exhibited peculiar nervous symptoms not at all unlike those which precede a gouty attack, and these perhaps may be explained by the condition of the blood. In Table I is contained a case which bears upon this subject; the patient, Clubb, was admitted for chest affection, bronchitis and emphysema; the blood was examined, and found loaded with uric acid; the affection did not yield to the ordinary treatment for bronchitis, but after a few days the chest symptoms almost instantaneously vanished upon the appearance of gout in the great toe and knee.

With regard to the remaining four cases, marked x, x, I may state, that they were not suffering from articular disease; and the nature of the affection is withheld on account of the subject having much interest, and being at present under investigation.

We must, in the examination of blood taken from various patients, expect to find now and then some uric acid, although its presence may have no connexion with the disease under which the patient is suffering; for when once the gouty diathesis is established, the blood, even in the intervals of the attacks, seldom becomes pure: this remark applies, no doubt, with much greater force to cases in which tophaceous deposits have taken place, and perhaps more to the asthenic than sthenic forms of the affection; for it is in such cases, more particularly, that the amount of uric acid climinated by the kidneys is found so greatly below the normal average. It will be observed, that all the patients suffering from nonarticular disease, and in whose blood uric acid was found. were males; this point is interesting, when connected with the fact of the much greater frequency of gout in the male than in the female sex. I have, however, occasionally seen the most severe forms of gout, with excessive chalky deposits, in the female.

In conclusion, as we have found that the blood in every

patient suffering from genuine gout, contained an abnormal amount of uric acid, and that in acute rheumatism such was not the condition of this fluid; and again, that in all cases which could be traced up to gout (although the symptoms exhibited at the time might not be very characteristic), uric acid was present, whereas it was absent in those cases where no such phenomena could be found, I think we shall in future be fully justified in considering this condition of the blood as not only a most important, but even a pathognomonic sign, and one more to be depended on than any of the other symptoms taken separately; and that in an otherwise doubtful case, where the diagnosis rests between gout and rheumatism, the presence or absence of this acid in the circulating fluid (determined either from the examination of the serum of the blood or blister exudation) may be looked upon as decisive of the question. I have little doubt, but that many of the cases of rheumatism which have been described by different authors, especially the capsular form of Dr. Macleod, are really gouty in their nature. Many, however, are neither gouty nor rheumatic, and evidently closely connected either with urethral affection or purulent condition of the blood. It will be seen, that the specific gravity and reaction of the blood has been noticed in the majority of cases; with regard to the latter property I may state, that I have always found it alkaline, both in gout and rheumatism, and I am perfectly confident that the opinion which has been held by some, to the effect, that in acute rheumatism it becomes acid, is completely erroneous. On calculating the specific gravity of the serum of the different bloods, reduced to a uniform temperature, the average was found to be rather less in gout than in rheumatism, but to so small an amount that nothing valuable in diagnosis could be obtained from it. It would also be necessary, before placing any value on this fact, to eliminate from the calculation certain cases in which the specific gravity of the blood might have been altered by other causes than the diseases under consideration. With regard to the urine of gout and rheumatic patients, nothing is mentioned in the present paper; the

omission has been intentional, for I do not consider that our present knowledge of the subject is sufficient to enable us to make use of it in the diagnosis of obscure cases of these diseases. The difference between the condition of gouty and rheumatic urine becomes characteristic only when the other symptoms or signs are so. Much that is erroneous on this subject is doubtless often entertained, the appearance of copious deposits of urates being taken as indications of excess of uric acid in the blood; the converse, however, is more frequently correct, and impurity of the blood from urates is usually dependent on their deficient elimination by the kidueys.

Postscript.—October 10, 1854.

Since the above paper was read, I have examined the blood in fourteen cases. In four patients there was an abnormal amount of uric acid. Three were males: all had had a special great toe affection: two had chalk stones in ears and around joints: one was a painter, and had suffered from lead colic. In five cases, where the symptoms were those of genuine acute rheumatism, no uric acid was detected: the remaining six were cases of a miscellaneous character, and the blood was free from the acid.

OF

TRAUMATIC ANEURISM

OF THE

OPHTHALMIC ARTERY,

CONSEQUENT ON INJURY OF THE HEAD,

CURED BY LIGATURE OF THE COMMON CAROTID ARTERY.

BY

T. B. CURLING, F.R.S.,

SURGEON TO THE LONDON HOSPITAL.

Received June 27th .- Read June 27th, 1854.

The relation of the ophthalmic artery to the optic nerve is so close, that any serious enlargement of the vessel must be very liable to affect the function of vision, and it is therefore fortunate, that the artery is so situated, and so well protected, as to be very little subject to disease or injury. It appears, however, to have suffered in a few instances of injuries of the head, and as the changes which take place under these circumstances have not been particularly noticed, I venture to submit the following case to the consideration of the Society.

J. M., æt. 49, a labourer, was admitted into the London Hospital, March 24th, 1854, with a fracture of the clavicle, and considerable hemorrhage from the right ear, and labouring under the symptoms of concussion. He was by no means a robust man, and his hands were contracted and crippled by rheumatism. It appeared, that he had fallen from the top of a stack of wood, seven feet in height, and pitched on his right shoulder and right side of the head.

He was stunned by the fall, and remained quite unconscious until after his admission into the hospital. There were only slight marks of contusion on the head, and no evidence of fracture of the skull. Shortly after being placed in bed he vomited, and he remained in a semiconscious condition, with a feeble pulse, for several hours. The head was shaved, a cold lotion kept to it, and a smart purge given. On the following morning he was more conscious, and after remaining for three days very restless, he seemed to be improving. The hemorrhage from the ear was followed by a serous discharge for about a week, and by total deafness of the right ear, and he complained of a dull aching pain on the right side of the head. In about a week after the accident, the face was observed to be drawn slightly to the right side, but the tongue could be protruded straight out of the mouth. He was blistered behind the right ear, and ordered to take small doses of calomel; and as he was in a weak condition, his diet was improved. In a fortnight later, the paralysis of the right side of the face had nearly subsided, and the pain in the head had diminished. About the beginning of May, I noticed a little inflammation of the conjunctiva of the right eye, attended with slight chemosis. For this, a lotion consisting of a weak solution of the nitrate of silver, was ordered. The injection of the conjunctiva and chemosis continued, however, to increase, and the eve-ball was observed to be prominent. I then suspected that some mischief was going on at the bottom of the orbit. There was also more pain in the head. An issue was made behind the ear, and the nitrate of silver lotion to the eve was discontinued. Fomentations were substituted, and two leeches were applied to the right temple, and repeated two or three times. This relieved the pain in the head, but had no effect on the eye.

May 22d.—The eye-ball protruded so much, that I was induced to make a careful examination of the orbit, which led me to detect a pulsation on placing the finger on the upper lid, and pressing gently on the globe. The proptosis

was more marked two days afterwards, and a very distinct bruit was heard when the ear was placed against the patient's right temple. He also described the pain in the head as a distressing throbbing sensation. Vision was not all impaired; but he had very little power of moving the eye. He was kept at rest in bed, with the head elevated, and a small bladder of ice was applied over the orbit; but this was so uncomfortable, that it was discontinued after two days.

31st.—A consultation was held to consider the propriety of tying the carotid artery. The patient had lost the left eye from cataract ten years before, which rendered it of greater consequence to save the right. The sight of this eye was somewhat impaired, but as he could see, with a little difficulty, to read small letters, and vision was not decidedly injured, and the proptosis had not perceptibly increased for two days, it was decided to wait.

June 2d.—Finding the eye getting more prominent, and vision becoming impaired, the pupil being widely dilated, I determined on tying the right common carotid artery. The ligature was applied on the vessel in the upper third of its course. The pulsation of the eye-ball was at once arrested, and the man was relieved of the beating pain in his head. A dose of morphia was given at bed-time.

3d.—The man had slept only one hour. He experienced pain in swallowing, and had slight twitchings of the muscles. The eye was less prominent, but vision was not so good as before the operation.

4th.—He was unable to discern the objects before him; indeed, his vision was lost. He could only distinguish between light and darkness. The pupil was dilated, and the iris did not act on exposure of the eye to strong light. He was otherwise doing well, and felt no pain in the head.

5th.—The chemosis and redness of conjunctiva had nearly disappeared, and the projection of the eyeball had almost subsided. The cornea was dull and hazy. The grey iris was slightly discoloured, of a greenish hue, and the pupil was widely dilated, of an irregular oval form from old adhesions. He experienced considerable intolerance of light.

On the 8th the cornea was observed to be less hazy, and by the 11th had become nearly clear. Vision was returning, but the intolerance of light continued. He had quite recovered the power of moving the eveball, which had subsided to its proper place in the orbit. He could hear better on the right side, and the facial paralysis was scarcely perceptible. He cat and slept well. On the 13th he could distinguish objects held before him. The pupil, however, remained dilated, and the iris motionless under the stimulus of light. In about a week later the intolerance of light passed off, and he was able to discern objects at a distance pretty clearly, but not near objects. He could not see to read, nor make out the hands and figures of a watch. On looking, however, through a small hole in a card, he was able to see much better, and could read with a little difficulty, and ascertain the time on the face of a watch. The ligature came away on the 23d day. P.S.—The patient was discharged from the hospital at the end of July. His vision was at that time much improved. The pupil was less dilated, but still fixed.

The history of the above case clearly shows, that a severe injury of the head had been the occasion of the formation of an aneurism of the ophthalmic artery. The bleeding from the ear, the subsequent discharge of serum, and total deafness of the right ear, and paralysis of the parts supplied by the portio aura, indicated some scrious injury to the base of the skull, and it seems probable that the petrous portion of the temporal bone was fractured, and that by the extension of the fracture to the optic foramen the ophthalmic artery had been wounded by a splinter or detached fragment of bone. There was no indication, however, of an aneurism having formed until upwards of five weeks after the accident. Its progress was then slow, and vision was not affected until nearly a month after the first appearance of anything wrong in the orbit, and was only slightly impaired before the operation.

I was unwilling to place a ligature upon the carotid, which in a person of feeble health and weak power was not unlikely

to produce cerebral mischief, without an urgent necessity for the operation; but the previous loss of the left eye rendered the preservation of the right of greater consequence. I watched the case, therefore, with anxiety from day to day. having resolved to tie the carotid artery immediately that vision was seriously threatened; and having performed the operation, apparently in good time to save the eve, I was greatly mortified to find sight entirely gone on the second day afterwards. This occurrence, and the recovery of sight in a short time, are circumstances of much interest in the history of the case. The temporary loss of vision must be ascribed to changes consequent on defective nutrition, from the arrest of the circulation through the carotid artery, the aneurismal tumour interfering probably with the supply of blood to the eveball from collateral sources. But as the proptosis subsided, and the circulation became reestablished. the eye recovered its nutrition, the cornea became transparent, and sight returned. The remarkable dilatation of the pupil, which continued after the recovery of vision, cannot, I think, be referred to the same cause. It seems most likely to be due to the aneurism pressing on or stretching the ciliary nerves, and destroying their functions, as respects the motions of the iris, producing, in fact, mydriasis.

This case clearly establishes the great danger to vision caused by a traumatic ancurism of the ophthalmic artery, from pressure on or traction of the optic nerve, and the ciliary nerves. It also shows, that to avoid these sources of danger, as well as to prevent the risk of the eve being injured by impeded nutrition after operation, a ligature should be applied to the common carotid artery at an early period, or soon after the detection of the pulsating projection of the eve-ball.

In 1834, I witnessed, at the London Hospital, a case of a similar nature to the one just related. A youth sustained a fall which produced concussion, attended with proptosis, dilated pupil, and loss of vision of the right eye. The prominence of the eve-ball increased, and at the end of a 15

XXXVII.

month pulsation was detected. During a fit of coughing, violent arterial hemorrhage occurred from the nose, when Mr. Scott, who was at hand, instantly tied the right common carotid artery. The proptosis subsided, but vision remained permanently lost. Mr. Busk, in a brief notice of this case, justly remarks, "the protrusion of the globe immediately after the accident, without symptoms of cerebral compression, proved that it arose from extravasation of blood within the orbit, and the further continued protrusion rendered it probable that the aperture in the vessel from which the blood escaped had not closed.

These two cases, and the interesting one related by Mr. Busk, in the 'Society's Transactions' (vol. 22), are, I believe, the only examples of aneurism of the ophthalmic artery, consequent on an injury of the head, on record. In Mr. Busk's case, it appears that a scaman was rendered insensible by a severe blow, which was followed by bleeding from the right ear and deafness, with paralysis of the left side of the face, and immobility of the left eye, with dilated pupil. Suppuration of the cornea ensued, and ended in an opaque cicatrix of its lower half. About seven months after the accident, Mr. Busk detected a small pulsating tumour in the left orbit, and tied the left carotid artery. patient recovered, with vision through the upper part of the cornea, but with a fixed pupil. The proptosis appears to have been but slight, and after the discovery of pulsation, the carotid artery was tied without delay.

ENGLISH STATISTICS

OF

HOOPING-COUGH.

ву

EDWARD SMITH, M.D., LL.B., LOND. UNIV., &c., HONORARY SECRETARY OF THE MEDICAL SOCIETY OF LONDON.

COMMUNICATED BY
H. BENCE JONES, M.D.

Received June 26th .- Read June 27th, 1854.

Etiology of Hooping-Cough.

In 1851, I published a series of papers in the 'Medical Times,' on the Etiology of Phthisis, chiefly prepared from returns which had been made to the General Register Office. but which have not been issued. I purpose now to solicit attention to similar statistical details in reference to another and less important pectoral affection, with a view to a more extended analysis than can be inserted in systematic works written upon that disease. I am not ignorant of such valuable summaries as have been given by Dr. West in his very excellent work on 'Diseases of Children,' and more recently (since this paper was written) by my talented friend Dr. Gibb; neither am I prepared to affirm that professional opinion on this subject is in any way inaccurate; but since much that is mysterious still clings around the origin of hooping-cough, and since the disease is, at the present time, very fatal, it seems not inopportune to offer such further observations as the present state of science will permit. As accuracy should be an essential element in all statistics, and as mere numbers of cases, without any datum from which

to calculate their true value, is of little or no avail, I shall pursue my former course, and restrict my investigations to the returns published by the Registrar-General. I do not refer to the results of personal experience, or even to those of any public institution, no matter how large either may be, since, if we were prepared to grant that such returns could be as accurate as those obtained by an institution exclusively devoted to mortality statistics, they must be on a most contracted scale, and lack that great basis of comparison—the proportion to the population.

As a preliminary remark, I may observe that, whilst this age is remarkable for the cultivation of medical statistics. we are still, de facto, restricted to a consideration of fatal cases only, and therefore remain wholly ignorant as to the precise prevalence of any affection. This observation, it is true, varies in value according to the nature of the disease under review; for if that disease be necessarily fatal, a knowledge of its mortality will give its real prevalence; but, on the other hand, if the given disease be but rarely mortal, so in the like proportion will the results of the mortality tables be of little avail. This is pre-eminently the case in the disease now under consideration; for if we may rely in any degree upon the results of personal experience, the fatal bear searcely any proportion to the recovered cases; and, further, when death occurs, it is due rather to the complications of the disease than to the disease itself. Again, mortality tables afford no information upon many associated points of inquiry-as, for example, the duration of the disease, and the nature and frequency of its complications. The influence of age, sex, and season is, for the same reason, but imperfectly shadowed forth; for if we aver otherwise, we must assume that, whatever may be the proportions which these influences bear in mortal cases, they necessarily exercise the same, in the same ratio, in recovered cases. This cannot but be unsatisfactory to every inquirer, and should excite the profession, as a body, to seek a removal of the evil; but until an institution is established for the collection of vital statistics on similar

principles to those of the General Register Office, in reference to mortality statistics, or until some combined and intelligent efforts are put forth by all our medical bodies, for the like purpose, the efforts of individuals will be made in vain.

The following summary of our available information is true of hooping-cough, and almost equally true of every other disease, viz., that the frequency of its attack, and the period of its duration, is really unknown; and that the influence of age, sex, and season, is uncertainly indicated; whilst the number of the fatal cases of the disease and its complications, combined with the age, sex, and the season at and in which the deaths occurred is known with almost sufficient certainty. I shall, therefore, limit this communication to a consideration of the mortality statistics of Pertussis.

Frequency.

As the disease is for the most part not fatal, one is oftentimes struck with the reports of deaths returned in the London district, as from 60 to 80 per week in the winter and spring months, and so many as 36 per week throughout the year, on an average of 10 years past. The true importance of this amount of mortality is not perceived by the mere repetition of the numbers, but rather when it is contrasted with the mortality from some other diseases. Thus, in the same registration district, during the 10 years from 1844 to 1853, both inclusive, of the 99 diseases which the Registrar-General has selected, under which to arrange the general mortality, hooping-cough occupies no lower a rank than the 7th place from the highest. The only affections of the chest (a class of affections with which it may be associated) which have a higher mortality, are phthisis, pneumonia, and bronchitis, in their order; of members of the zymotic class (with which it is also connected), only typhus and scarlatina exceed it; and lastly, of diseases of the nervous system (with which it again has a correspondence), convulsions alone have a higher mortality.

Thus, of the 99 diseases, or classes of diseases referred to, the following alone have a higher mortality, viz., phthisis, pneumonia, bronchitis, typhus, convulsions, and scarlatina, in their order. It is a fact worthy of prominence, that the mortality from disease of the heart, hydrocephalus, apoplexy, measles, and smallpox, each in its order, is less than that of hooping-cough. This is not in accordance with popular belief, whether in its relation to some of the affections referred to, or to others which are known to be deadly, but which, nevertheless, have so slight a mortality as to rank only after the last in the list just mentioned.

TABLE I.

Mortality from selected diseases in the London district during the ten years from 1844 to 1853, both inclusive, arranged in the order of prevalence.

Phthisis					68.204
Pneumonia .					36.494
Bronchitis .					32.146
Typhus .					23.107
Convulsions .					21.531
Scarlatina .					20.444
HOOPING-COUGH					18.666
Disease of the Heart					17.647
Hydrocephalus .					15.977
Apoplexy .					12.629
Measles					11.627
Smallpox .					9.007
Total from all causes					553.694

The like relative importance of hooping-cough is observed when the state of England and Wales is examined; for if we take the last returns published, viz., those of 1847, we find that only one additional disease takes precedence of it, viz., diarrhæa, and then the more usual diseases are phthisis, typhus, convulsions, pneumonia, bronchitis, scarlatina, and diarrhæa, in their order. There is, however, some discrepancy when we analyse the great divisions into which

England is divided, for there we discover that in the eastern and York divisions, there are only three or four more fatal diseases; whilst on the other hand, in the south-western, there are no less than sixteen diseases which to a greater or less extent take precedence. As it may be of interest to notice the diversity in the relative mortality from various diseases in the great divisions of England, I have prepared the following Table:

TABLE II.

The Diseases in their order of mortality which were more mortal than Hooping-Cough in 1847 throughout the Registration Divisions (exclusive of London) in England.

hthisis 3629 onvul, 2524, yphus 1966 mallpx 1003 ncum, 888 ropsy 868 ropsy 868 ropsy 479 casles 547 sthma 455 aralysis 416	365
Phthisis 2649 P Scarlati, 2012 C Typhus 1304 T, Pneum. 973 Si Convul. 959 P Dropsy 718 D Bronch, 678 Si Blydroce, 526 Si Diarrh, 486 M Reartysis 433 P Paralysis 433 P	427
sis 5228 11. 5228 12. 5229 13. 5229 14. 5229 15. 5229	1206
Phthi Convergence Scarle Pneur	
yphus 9076 hthisis 9044 hthisis 9047 onvul. 5399 Narh. 3868 neum. 3464 cearlati. 3339 leastes, 2979 leastes, 2127 yysent. 1632	1608
hthisis 3505 T onvul. 2187 F yphus 1664 C neum. 1428 F ronch. 654 S feasts, 654 S feart. 550 M cart. 510 I carlati. 480	924
hthisis 5976 P 'yphus 3388C 'neum, 3307T 'onvul, 2506 P carlati, 2493 E ronch, 1929 B ronch, 1925 B	1028
Phthisis 47.43 Phenam. 223.0 Tryphus 1662 Phenam. 223.0 Tryphus 1662 Phenam. 1212 Shonch, 1212 S	363
Phthisis 3457 Typhus 1262 Typhus 1262	806
Phthisis 4569] Typhus, 2030] Pueum, 1529 Convul. 1027 Dropsy 919 Bronch, 779 Apoplexy 597 Ileart 553 Diarrh, 546 Scarlat, 542 Paralysis 488	381
thisis 4507 phus 1884 peum. 1831 poun. 1831 poun. 1842 poun. 1442 poun. 1300 poun. 1300 peum.	Hoop. 1000 Cough
	Phthisis 3457 Phthisis 5976 Phthisis 3505 Typhus 9076 Phthisis 5228 Phthisis 2649 Phthisis 388 Convul. 2187 Phthisis 9044 Convul. 3386 Scarlati. 2012 Convul. 3386 Scarlati. 2012 Convul. 3305 Typhus 1664 Convul. 3399 Typhus 1394 Typhus 1304 Typhus

It must be remembered, when studying these tables, that whilst No. I is obtained from an average of 10 years, and may therefore express the truth, No. II represents but one year, and may be, in some of its parts, only an approximation to the truth. Moreover, the numbers now referred to, demonstrate only the actual deaths which have occurred, and not the true ratio of mortality; and it must ever be borne in mind, that the absolute mortality and the ratio of mortality are not convertible terms. The ratio of mortality can only be determined by selecting some basis for a common computation, and then computing each one separately on that basis. The basis most commonly selected of late years, is that of the population at the ages at which the deaths took place. This I shall use when considering the influence of age over the mortality from hoopingcough. The older basis of computation (or that adopted before the returns of the census were so minute and accurate as at the present time) was the total mortality in given districts; but this is of but little value, for it is a matter of common belief that the relative prevalence of many diseases, as of phthisis and typhus, for example, has varied much during the last fifty years. On this basis, the mortality from hooping-cough was to the total mortality in London, during the 10 years (1844 to 1853), as 1 to 29.6. This fact may be used as an excellent illustration of the importance of preparing statistics from a series of years, rather than from any one year; and also of taking a wide area over which they may range. Thus, in 1847, the proportion in all England and Wales, was as 1 to 45.7; and in London, in that year, instead of being as 1 to 29.6, it was as 1 to 37. Great variation was observed in the several divisions, ranging from 1 to 94.8, up to 1 to 28.1. Thus, eastern 28.1; south-eastern, 32.8; York, 35.5; London, 37; northwestern, 49.2; west midland, 49.4; northern, 53.8; southmidland, 68.4; Welsh, 72; and south-western, 94.8.

Recurring to the London statistics for the 10 years above mentioned, we notice that the mortality varied greatly throughout the series, and was the greatest in 1853 (50 per

week), and 1849 (45 per week), whilst it was the least in 1844 (25 per week); the average of the 10 years being, as above mentioned, 36 per week. In explanation of this fact it may be stated, that the two former years were also remarkable for their general mortality, and that cholera was epidemic in 1849; for a common belief prevails to the effect, that the degree of mortality of any disease may be influenced by the healthiness or otherwise of a season regarded as a whole. That these two facts do not run parallel in this instance, may be inferred from the following facts. The general mortality was far greater, and yet the mortality from hooping-cough was much less in 1849 than in 1853. The year 1847 had even a higher ratio of mortality than 1853, and yet the weekly deaths from hooping-cough were only 30.7 in 1847 to 50 in 1853. In 1849 and 1853, the deaths from allied nervous, pectoral, and zymotic diseases, separately, were increased with the increase of the general mortality, but not by any means in the proportion in which the mortality from hooping-cough was increased; whilst on the other hand, in 1847, the mortality from hooping-cough was very greatly reduced, and yet that from influenza was increased tenfold; and from nearly all other members of the zymotic class, with pectoral diseases, was doubled. The mortality from nervous diseases was also then increased. The year 1844, which was so exceptional in reference to the diminished mortality from hooping cough, was not in like manner exceptional in relation to the general mortality; for whilst the general mortality was low, it was yet higher than other years in the series, in which hooping-cough was more fatal.

Thus it is probable, that the mortality from hooping-cough bears no exact analogy to that from all causes, nor to that from the most closely allied classes of diseases. It is needful to proceed from the examination of generals to particulars, such as age, sex, and season, in order to discover the special circumstances which exert so important an influence over this disease.

The Influence of Age.

The influence of age is well marked, and in accordance with common belief. The latest statistics, on a large scale, are those of 1849, for England and Wales, which give the mortality from each disease at various ages. Before using these returns, it is necessary to determine the ratio of mortality as estimated from the population living at the various ages during that year. We have the returns of the census for 1841, and the proper correction for the increase of population for the six years is the addition to the census of somewhat less than a 10th part. It is true that this correction must vary with the varying increase of population during each decennial period, and also that the rate of increase on female lives, as determined by the census of 1841, viz., 1.332 per cent., has not been confirmed by the census of 1851: vet, as the last decennial retrogression has been due to temperature and pestilence, neither of which occurrences had excited any very marked disturbing influences previous to 1847, we are, I think, justified in using for that year the old rate of increase. Whatever rate, however, is agreed upon, the relative mortality of diseases in that vear is equally well determined. As I adopted that correction in the paper on the 'Etiology of Phthisis,' I propose to resume it here. The ratio of mortality from hoopingcough to the whole population, at all ages, when calculated on the above basis, is as 1 to 1814; whilst, for comparison, that of phthisis is 1 to 324; and of pneumonia, the second disease in point of mortality, 1 to 737. The following table exhibits the absolute mortality, with its ratio to the population at various ages, as observed in England and Wales in 1847:

TABLE III.

Age.	Deaths in England and Wales 1847.	Per Centage proportion to the whole Deaths 9260.		Mortality Popula- t various
All ages.	9260		1 in	1814
Under æt. 1 year 1 to 2	3746 2546	40·4 27·4	"	123 182
Under æt. 2 years	6292	67.8		
2 to 3 3 ,, 4 4 ,, 5	1284 720 437	13·8 07·7 04·7	27 29 21	367 614 991
Under æt. 5 years	8733	94.1	,,	260
5 to 10 10 ,, 15 16 ,, 20 Upwards to 90 Unknown	487 20 6 12 2		77	4222

From the above table we learn, that more than two fifths of the whole deaths occurred under 1 year of age; more than two thirds under 2 years of age, and nearly the whole, that is, ninetcen twentieths, under 5 years. The chief feature in reference to the true ratio of mortality is the fearful prevalence and fatality of the disease when attacking infants under 1 year of age. This is no less than 1 to 123 living, a mortality considerably greater than that of phthisis, and beyond that of any other disease except those comprehended under the general terms convulsions, pneumonia, and diarrhoa, in their order. We may safely affirm, that hooping-cough (with its complications) is the most fatal of all diseases during the first 12 months of life. From this period it progressively and gradually declines in fatality until the commencement of the 5th year. and after the 10th year is comparatively innocuous or unknown. This fact being established, it would be proper to analyse the circumstances which attend upon the earliest months of existence, with a view to isolate those which have

an especial reference to the production of this disease, but I am not aware of any data on which we can proceed, except such as exercise an influence over the general mortality at that early period, and especially such as tend to produce convulsions, or other fatal derangements of the nervous system. There can be no doubt of the fact, that the high degree of sensibility to impression which attends upon infancy, plays a most important part in this, as in other diseases, but that it does not simply act by adding intensity to the effects accruing from changes of temperature, may be inferred from the (probably) equal prevalence of the affection amongst all classes of the community; and in like manner it may be inferred, that it does not act by the ordinary zymotic influences only, since it alone, of all zymotic diseases, nestles itself habitually in the infant's cradle.

The Influence of Sex.

The influence of sex over mortality is in general rather the indirect one of the circumstances in which each sex is especially placed, than the direct one of any peculiarity of organization. (Diseases of the sexual organs are of course excluded from this statement.) But few diseases are known to have any universal preference for the female over the male sex, although most diseases have their nervous element somewhat more developed in the former than in the latter. This latter has usually been attributed to the higher sensibility or delicacy of organization which experience has ascribed to the female sex; and since we cannot doubt that this condition of system does obtain, it would not seem an unreasonable inference if we were to infer that any affection which has its essential seat in deranged nervous function, may directly prevail in the former sex. Yet, as suggested to me by my friend Dr. Sibson, such an inference is directly negatived by the palpable fact that convulsions (in the somewhat confused form recorded by the registrar-general) are not only more frequent in males at all ages, but in infants under I year. It is difficult to reconcile this fact with what would

otherwise appear to be a legitimate deduction; and although at all times ready to give the preference to fact over theory, we cannot but believe that some circumstances exist, as yet unknown to us, which would greatly modify the influence of the fact just mentioned. Whether this is associated at all with the distinction between mortality and prevalence to which I have before referred, I cannot tell; but it is quite within legitimate conception, that a disease may prevail in one sex, and yet be even more mortal in the other sex. convulsions, for example, it does not follow, that because the greater mortality has been undoubtedly observed in the male sex, that therefore the true ratio of the prevalence in numbers, of the disease, attaches to that sex, for it is one thing to have a disease, and another to die from it. Moreover, as more males than females are born, it would demand more deaths of the former than of the latter, in order to make an even ratio of mortality. Further, if we may justly admit, that there is greater sensibility to impression in the female, we may with equal truth affirm, that there are greater powers of passive endurance also; and therefore it is not inconsistent to state, that females may be more liable to a disease than males, and yet that the mortality may be really greater in males.

But if this reasoning may be allowed in reference to convulsions and other nervous affections, it does not suffice to explain the indisputable fact, that hooping-cough is much more fatal in females than in males. The female system, in reference to this disease, seems to have not only a theoretical predisposition to its attack, on account of its delicacy of organization, but a predisposition to succumb under its influence; for not only are there more females than males living at every age, but the number of deaths and the true ratio of mortality are greater in the female sex. This is a most interesting fact in relation to convulsions, and other fatal nervous diseases with which hooping-cough, in its essential character, is unquestionably allied, and one which for the present appears to be inexplicable. It may be true, that hooping-cough kills by its complications, and that these com-

plications are usually inflammatory; but that does not help us, unless we could prove by statistical facts, that the female system is especially prone to the attacks, and the fatal termination of inflammation. The fact, however, remains, that hooping-cough is more mortal in the female than in the male sex; but there are no data to show, that the female system is more prone to the attacks of the disease.

The following table shows the number of deaths from hooping-cough which occurred in each sex at various ages in England and Wales during 1847, with their respective ratios of mortality to the population.

TABLE IV.

	MA	LES.	FEMALES.								
Ages.	Deaths in England and Wales. 1847.	Proportion to the Population. 1847.	Proportion to the Population. 1847.	Deaths in England and Wales. 1847.							
All ages	4126	1 in 2044	l in 1717	5134							
Under æt. 1 year	1767	,, 143	,, 119	1979							
1 to 2 years	1092	,, 212	,, 159	1454							
2 ,, 3	567	,, 414	,, 330	717							
3 ,, 4	318	,, 689	,, 554	402							
4 ,, 5	169	,, 1297	,, 807	268							
Under æt. 5 years	3913	,, 288	,, 237	4820							
5 to 10	202			285							
10 ,, 15	4			16							
15 ,, 20	3			3							
Upward	4			8							
Unknown				2							
	4126			5134							

The above table proves, not only that at every period of life the true ratio of mortality is higher in females than in males, but the yet more interesting fact, that this preponderance increases as life progresses. Thus, whilst under 1 year of age, the excess in the ratio of mortality amongst females is one sixth, it is less than one third in the fifth year of existence, and was reduced to one fourth in the second year, and one fifth in the succeeding intervals. It is unsa-

tisfactory to pursue the comparison at later periods of life, on account of the smallness of the numbers to be contrasted, but so far as this is of value, it proves that this preponderance is maintained, and even increased at puberty, and for an indefinite period beyond that æra. This curious fact sustains, in a degree, the theory above mentioned, viz., the predisposition arising from organization, since we may assume that the peculiarities of the female organization are not so distinguishingly developed within the first year as in subsequent periods of life.

The Influence of Season.

We have hitherto been unsuccessful in all attempts to determine what element of the series constituting atmospheric phenomena, has had permanent influence over any disease, although, at the same time, we know well that the atmosphere, as a whole, or by some of its component parts and properties, does exert an important influence to this end. Electricity, winds, vapour, barometric pressure, and temperature, have each been investigated, and in all cases with some success; but with the exception of the latter, the published returns for series of years, either from want of uniformity in design, or occasional omissions and alterations, are not available. Temperature is therefore the only element which we shall consider apart from the others constituting the season.

The average temperature of the 10 years selected, 1844 to 1853, was 49·3°, whilst that of the two exceptional years of great mortality from hooping-cough, viz., 1849 and 1853, was 49·9° and 47·7° respectively. The year 1853 had a lower temperature than any in the series, except 1845, which was only ½ to f a degree colder. It was otherwise, however, with 1849, for six of the ten years had a lower temperature than that year. Thus, although the first mentioned year, that of 1853, was decidedly characterised by a low temperature, and experienced the greatest mortality from hooping-cough, and so far would connect cold and

hooping-cough together, it must be remarked, that the yet colder year of 1845 had only two thirds of the number of deaths from that disease; and, on the contrary, the year 1849, which had so great a mortality from hooping-cough, was a little warmer than the average of years. Considering the year as a whole, therefore, we do not trace the connexion between excess of cold and excess of mortality from hooping-cough.

In order to study the relation between temperature and this disease, we must examine, not only the exception, but the rule, and enquire what is the ordinary occurrence at the various seasons of the year. I have, therefore, examined these two points in each quarter of the seven years, 1847 to 1853, both inclusive, and have ascertained that the greatest mortality occurred five times in the 1st, and once in the 2d and 4th quarters, and that the least mortality took place five times in the 3d, and twice in the 4th quarters. This proves that the winter is the most obnoxious, and the summer the least obnoxious to this disease. But it may be objected that the division into quarters is artificial, and that as the seasons run insensibly into each other, and vet during the vear exhibit two opposite characters, it is more reasonable to convert the 1st and 4th quarters, either of the same, or better still, of consecutive years, and call them winter, and the 2d and 3d quarters and call them summer. Adopting this more natural division of seasons, I have found that the greatest mortality in the 7 years, was 5 times in the winter both of the same and of consecutive years, and the least mortality 5 times in the summer. This exhibits a remarkable correspondence with the results of the computation by quarters, and clearly demonstrates the influence which temperature exerts over this disease.

The following Tables illustrate the above remarks.

XXXVII. 16

TABLES V and VI.

Quarterl Hoopin don.				rom Lon-		arly Mor- all in the ear.	Half-Y The Wi	Years.		
	1st.	2d.	3d.	4th.	Summer.	Winter.		Summer.	Winter.	
1852 1851 1850 1849 1848	539 781 442 905 374	466 734 406 739 449	244 360 300 428 340	667 316 286 424 273 472 426	710 1094 706 1167 789	1369 855 1067 866 978 846 970	1853 1852 1851 1850 1849 1848 1847	1283 710 1094 706 1167 789	1018 825 1205 715 1377 800	1852-3 1851-2 1850-1 1849-50 1848-9 1847-8

A complete analysis of the influence of temperature demands a yet further restriction of the period over which the average shall be carried. The returns of the Registrar-General would enable us to reduce the average of the mortality to weeks, and of temperature to days, but since in but few, if any, instances do the atmospheric conditions of a week produce immediate death, it would be needless to so far limit our attention. Persons may reasonably differ in opinion as to the length of time which may usually elapse between any atmospheric change and the fatal results, and therefore, as to whether the lowest analysis should be that of 2, 3, or 4 weeks. As the selections must be arbitrary, but yet so far founded on observation, I think that monthly periods would probably exclude mere occasional influences, and connect together, by an average, the cause and its effect. I have adopted this plan, and have deduced the weekly average both of mortality and temperature from the totals of each concluding month in the years 1847 to 1853, both inclusive.

TABLE VII.

The mean Weekly Average of Monthly Mortality and Temperature, London.

Month	Month.		February	March	April	May	June	July	August	September	October	November	December
853.	Тетр.	44.3	33.7	37.4	45	50.1	57	60.3	6.03	56	51.4	20	35
18.	Mort.	39-6	58.5	99	74.5	63	61.2	40	31	25.5	9.98	£ 15	9.19
1852.	Temp.	41.2	7	9.01	45.1	51.1	55.3	65.7	65.5	57.9	1.81	50.1	46.7
18	Mort.	52	38.5	43.5	41.5	37.6	53	18.4	16	62 62	22.6	57 57	28.7
1851.	Temp.	10.1	41	41.7	45	48.5	57.8	60.1	62.4	55-9	24	39.5	11
18	Mort.	48	54.5	74-4	59.5	63	45.5	35.7	28.4	18.7	14.2	23.8	27.5
1850.	Temp.	32.3	43.9	39-9	47.8	49.5	60.3	62	61.2	2.99	48.1	91	39-9
18	Mort.	30.5	34	37	33.2	36	56	23.5	25	25.4	22.7	25.6	57.5
1849.	Temp.	40.2	42.0	12.4	15.6	53.1	2.99	62.5	65-5	57.7	51.3	47.5	38.1
18	Mort.	09	60.5	9.92	58.2	61	52.4	37.5	35.2	27.6	22	18.7	22
848.	Тетр.	34.4	43.2	42.5	47.9	69.5	59.5	61.8	57	57.3	52.1	43.2	14-9
18	Mort.	32.5	25.5	26.2	38	36	28.7	58.6	22.5	27.4	29.5	29	9.21
1817.	Temp.	3-1-4	35.4	19.7	53-2	55	57.6	64.5	62.3	55.2	52.5	8.91	1-5-1
18	Mort.	7	41.5	39.5	35.5	33	21	18	17.5	19.5	19.7	27.5	1.71
	Month.	January .	Pebruary .	March .	. April .	May	June	July	Angust .	September	October .	November	December

The same facts are also represented in the diagram No. I, in order that the contrast of temperature and mortality may be more quickly appreciated.

The foregoing Table and Diagram show, that the mortality and temperature are in the inverse ratio to each other, and that the former proceeds in waves from about August, when it is at its minimum, to about April, when it is at its maximum, returning to its minimum about the following August, and thus continuing in even waves of increase and decrease, with remarkable regularity, from year to year. The maximum and minimum months occasionally vary. Thus, the former, instead of being April, may be March, and in one instance, it was the preceding December; whilst the latter, instead of being August, may be July or September, and in one instance, was even November. This degree of variation, however, in no sense invalidates the rule which has just been laid down. In reference to temperature, the Diagram proves that the mark of its maximum is not that of the minimum of mortality, but the one which immediately precedes it; and so, in like manner, with the minimum of temperature and the maximum of mortality. This rule is also, like other rules, liable to exception; but when such exceptions occur, it will usually be found that the temperature, or the mortality, has remained at nearly the same point during two or three months. In such instances, it manifestly gives a false importance to one particular month over its neighbour, if it be denominated the minimum mouth, because it had one, two, or three degrees less tem-Such is the relation between mortality and temperature; and after making every allowance for exceptional eases, we cannot but be struck with the regular and almost constant apposition upon the Diagram of the two lines of temperature and mortality.

The waves of the greatest intensity in the series of years referred to (1847 to 1853), occurred at intervals of two years, and were succeeded by a marked rapid and extreme subsidence in mortality during the summer and early autumn months, and did not again approach to the same

intensity during the succeeding years. Thus, in 1849, 1851, and 1853, the highest average weekly mortality in one month, was 76.6, 74.4, and 74.5, respectively, whilst in the alternate years, 1848, 1850, and 1852, the like highest average was only 47.6, 51.2, and 52. In the latter part of the former years, however, there was not that uniformity of opposition of the lines of mortality and temperature which constitutes the rule, but, on the contrary, a disposition was manifested to pursue a parallel course. These facts may tend to prove, that a severe outbreak of the disease is followed by diminished intensity of mortality, and that, to a certain degree, in spite of the action of causes which, under other circumstances, would have heightened the mortality. This is an interesting feature, and one which it would be worth the trouble to work out through a much larger series of years, could we obtain the necessary statistical returns. It, however, probably corresponds with some other zymotic diseases. Another circumstance of interest to be gathered from the Diagram is this, that at the close of each alternate year of accession, the intensity of mortality seemed rather to move in advance than in the year of the subsidence of the temperature, in opposition to the fact just noticed in relation to the years of intensity; for, in November of the years 1848, 1850, and 1852, the mortality suddenly increased, whilst the temperature yet remained at a tolerable height, viz., 45°.

The intensity of mortality usually advances and recedes by slow and stealthy steps, but in many instances, it appears to leap suddenly in another direction, and it is not difficult to draw a line which may be considered the boundary line between low and high mortality. This lay between 45° and 48°, for it was only as the summer temperature descended to that point that the mortality assumed a decided average tendency to increase.

From all the foregoing observations, I think it is clear that mortality of hooping-cough attends diminished temperature with considerable precision, and so far may have a point of correspondence with other seasonal affections; but there is one point in which it differs from others, viz., that it is not increased in intensity by any intensity of the opposite season, or that of summer. Excessively high temperature, so far from having given rise to increase of mortality, was directly the reverse, and when the wave of minimum mortality occurred so late as the October of 1851, it was because the average weekly temperature of that month was 54°—a temperature higher than that of the same month in any of the other years in the series.

In order the more certainly to establish the position just laid down. I considered that indirect as well as direct evidence should be adduced. I have, therefore, prepared Table IX and Diagram II, with a view to show the absolute and relative bearings of temperature with the general mortality, and the three classes of disease with which hoopingcough is associated, viz., the zymotic, the pectoral (including phthisis), and the nervous; and also with a further view of ascertaining what correspondence in these relations exists between hooping-cough, and any or all of the three classes of diseases referred to. The table has been compiled by abstracting the weekly returns of deaths from the weekly reports, and adding the numbers together by months, and then dividing the result by the number of weeks, in order to obtain the weekly average per month. The Diagram is thus one of interest from the tangible nature of the extensive information which it readily affords. The relations of hooping-cough and temperature having been given, I need not again refer to them, but in describing those of the other lines of disease, I shall, throughout, have in view the intention of further illustrating this relation.

First, in reference to the line of general mortality. It is quite clear that the general direction of this line is directly opposed to that of temperature—the highest mortality occurring at the season of lowest temperature, or winter, and the lowest mortality at the period of highest temperature, or summer. The highest mortality is observed about January, but varying from December to March, and in 1852, was so late as May, whilst the lowest mortality occurs almost invariably

in June and July. In the cholera year of 1849, and in that alone, the lowest mortality was observed so late as November—that is, after the epidemic had subsided—and may naturally be attributed to the lack of subjects of fatal disease. The most healthy period of the year is from April to November, except in such years as experience the recurrence of fatal epidemic diseases. It should also be remarked, that, for the most part, the most fatal seasons in a series of years, are such as have the lowest temperature, as was the case in the winters of 1847-8 and 1852-3; whilst, on the other hand, the periods which experienced the lowest mortality in a series of years, as 1848 and 1850, were marked with the highest degree of temperature. The months of highest temperature and lowest mortality are not usually the same, but, as in 1849, the latter is a month later than the former. Thus it was particularly the case when the temperature had somewhat suddenly increased; for when the temperature throughout the winter had remained somewhat high and stationary for some months, as in 1850-1, or when it had increased considerably in March and April, as in 1847, the mouthly lowest mortality was in advance of that of highest temperature. In the latter case, it would seem that the long-continued high temperature became, bevond a certain point, a cause of mortality. On contrasting this statement respecting the general mortality with that of hooping-cough, several disparities will be observed sufficient to show that the cause of mortality from the latter disease is not identical with that of the general mortality.

In abstracting the returns for the three great classes of disease, I have comprehended the whole of each class, on the ground that, however diverse one number may be from another, they have essential points of resemblance; and also, because I could not venture to affirm that any one which I might wish to exclude had less connexion than any other with hooping-cough. The object is attained if they show, in general terms, the relation which they bear to hooping-cough.

The zymotic class, is remarkable from the opposition in

its lines with those of hooping-cough, since there are undoubtedly essential bonds of union between them. This opposition is the more remarkable in that hooping-cough is included in the line of zymotic disease.

In the zymotic class the lowest mortality is observed to correspond with the low temperature, and therefore with the beginning and the close of the year; whilst its highest mortality is observed in August or September, and therefore corresponds with the period of considerable, but not of the highest temperature. In no instance does its acme precede that of temperature, but it either corresponds with it, as in the cholera epidemic of 1849, or, as is more customary, immediately succeeds it. Its progress appears to be in cycles, having its origin or lowest point immediately after a severe outbreak of the disease, and thence remaining stationary for a period, but ultimately increasing in mortality by slow increments, until it again attains its maximum. There has been, as yet, no such yearly zymotic mortality since 1849, as was observed in the years immediately preceding 1849, but there has been a gradual increment since 1850. In all these various points, this great class differs from hooping-cough, and in its essential character is directly opposed to it. Indeed, there is not an instance during the seven years in which the lines of alternate increase and decrease of hooping-cough are not directly opposed to those of the great zymotic class; whilst, on the contrary, in almost all cases the zymotic lines and the lines of temperature tend to the same direction. This is a strong argument against the essential affinity between mortal cases of hooping-cough and the class under consideration. It is therefore certain, that our deductions in respect of hoopingcough are not weakened by any possible similarity between it and the zymotic class of diseases.

Directly opposed to the zymotic class is that of pectoral affections, for the lines of this class are in opposed waves to that of temperature, and in marked correspondence with those of hooping-cough. The highest point of mortality is almost invariably met with in January, and

corresponds accurately with that of the lowest temperature. In this latter respect the pectoral class differs from others, hooping-cough included, for its mortality keeps nearly even pace with the temperature. This is very strikingly manifested upon the Diagram. Its lowest mortality, too, is observed at the very months which have the highest temperature of the season, and thence remains nearly stationary during two or more months, or has a gradual tendency to increase. The months intervening between April and November, or December, are the least infected with this class of diseases, and in this respect, this class corresponds with the general mortality. The only noticeable distinction to be made between the lines of mortality from hooping-cough and chest diseases is, that whilst both invariably take the like direction, the former follows the latter in descending, and precedes the latter in ascending. The great similarity between hooping-cough and chest diseases, contrasted with the dissimilarity between the former and zymotic affections, cannot fail to induce us to regard them as most closely allied, and may almost suffice to induce us to enquire if they are not, in their morality, the same disease. It must not be forgotten, that hooping-cough, as such, is seldom fatal, and that the mortality really arises from its complications; if, therefore, we admit the evenness of the mortality of the two diseases, it would only be affirming, that in a great majority of the deaths from hooping-cough, the chest complication is the cause of the death, and it would leave the eventual nature of hooping-cough untouched.

The third great class of diseases, or the nervous, offers but unsatisfactory evidences of its affinity to hooping-cough, and that, perhaps, from the fact just alluded to, viz., that whatever hooping-cough may be, it is not usually mortal. The Diagram shows a remarkable uniformity and narrowness of limit in the range of this class of disease through each year, and through a series of years. The line searcely, if ever, has a greater range than 50 cases, and throughout the whole year does not extend through one half that amount. It can, therefore, searcely be influenced by the

change of seasons, and, consequently, can offer but little affinity to hooping-cough, the general mortality, zymotic, or chest affections. The highest point, little varied as that may be, appears to be during the cold season, and its lowest during the middle months of the year. Thus, on a review of the analyses of the mortality lines on the Diagram, we may affirm that the lines of hooping-cough do not precisely correspond with those of the general mortality; that they are directly opposed to those of the zymotic class; that they are greatly in accord with those of chest diseases; and lastly, that they have but little evident relation with those of nervous diseases. Thus we infer, that hooping-cough is a disease apart from those affections, and that any deductions made from its returns, cannot be weakened by any supposed resemblance between it and these classes of diseases. Further, we may affirm that mortal cases of hooping-cough disprove any alliance between it and zymotic disease, leaves it in doubt in reference to nervous diseases, and offers much support to an alliance with chest affections.

In order to exemplify the foregoing statements more clearly, I have compiled Table and Diagram III. These show the weekly average of the temperature, hooping-cough, and bronchitis, in the seven years already referred to, condensed into one year. By this mode, the ordinary variation is nowhere uninfluenced by temporary causes, and a more correct notion is given of the seasonal temperature and its influence on the mortality of the diseases in question.

The highest temperature occurred in the 28th week, and thence the temperature gradually and progressively declined to the end of the year, when it was at the lowest point, and its degree was precisely that observed in the first week of the year. Thus, the first and the last weeks of the year have the lowest, and 28th week the highest temperature. The progression and retrogression exhibited much uniformity, and from the 6th to the 11th week, the variations were more perceptible than at any other period of the year.

The mortality from hooping-cough attained its minimum (25 per week) in the 33d week, and continued low until the

47th week, when it suddenly increased to 37 and 42 per week, and terminated the year with 40 per week, the precise number with which it began the year. From this point it gradually increased until the 12th week, when it attained its maximum, and thence gradually, but with many variations, declined to its lowest point. In reference to its relations with the line of temperature, the following points may be noted. The two lines intersected each other in the 16th and 51st weeks, and from the 19th to the 49th week were directly opposed to each other. From the 49th to the end of the year, and from the beginning of the year to the 17th week, the lines, generally speaking, assumed a parallel and closely approximated, yet variable, course. There was an interval of five weeks between the highest temperature and the lowest mortality, but it must be mentioned, that the 2d week after the highest temperature, the mortality was nearly at its lowest point. Thus the mortality continued to decline for some time after the temperature began to slightly decline. It also continued low, not varying 5 cases per week, so long as the temperature continued above 48°, and thence it assumed a rapidly upward tendency.

The general parallel course between the lines observed at the beginning of the year is no evidence that the mortality was uninfluenced by the temperature, for at various parts the relation was very manifest. Thus, the downward tendency of the temperature in the 3d week, induced at the same time an upward tendency to the mortality, and so also in reference to the lower temperature of the 6th, 8th, and 10th weeks, for these were followed by increased mortality in the 7th, 8th, 10th, 11th, and 12th weeks. The increase of mortality, therefore, followed the diminution of temperature at an interval of one or two weeks, but the new tendency thus given did not subside on the instant, with an increase of the temperature, but continued for a period longer. Whenever, therefore, in the variations, the two lines run a parallel course, or may be seen between the 6th and 13th weeks, the true cause of the course of mortality is antecedent to that of temperature. The mortality never moves in advance of that of temperature, but often retains the impetus for a time after the projectile force has been Thus the general parallelism above referred to, directly confirms the truth of previous statements when analysed into its weekly variations. If further illustration were needed, it would be afforded by the lines passing through the 30th to the 39th week, in which the downward tendency of mortality is continued for a time after the temperature had ceased to increase, and in which alternate increase and decrease resulted from variation of temperature in the two weeks antecedent. Indeed, so universal is this rule in its application, that throughout the whole year the variations may be safely explained by it. The line of temperature below which hooping-cough runs its most mortal course, passes through the 48°, both in its advance and in its retrocession.

I have selected bronchitis as a point of comparison, on the ground established by diagram II, viz., that a close affinity exists between the class of pectoral affections (excluding phthisis) and mortal cases of hooping-cough; and further, because of all pectoral affections, I was of opinion that bronchitis was by far the most common disease. The line of mortality from bronchitis is worthy of attention, both absolutely and relatively to hooping-cough. Its highest point is in the 49th week (142 cases per week), whence it rapidly descends to the end of the year to a point lower (16 cases per week) than at the commencement of the year, and continues high until the 11th week, when it suddenly and progressively declines to the 31st week, and is at its minimum (27 cases per week); and after remaining nearly stationary during 6 weeks, begins rapidly to ascend to the 37th week, and in 12 weeks reaches its maximum. Thus it is essentially a winter disease, and leaves so large a portion as the half of the year, at which its mortality does not attract attention. The chief points of contrast between this and hooping-cough are, that its variations attend more instantaneously upon temperature, and are to a much greater extent; that its highest mortality occurs at other times, and

that the mortality remains stationary at and ascends under a higher temperature, whilst its point of agreement is the general direction of its lines with hooping-cough, and opposition to those of temperature.

-

The following conclusions are a few of those which may be drawn from the foregoing communication:

1. In reference to its frequency:

In the London district the diseases which are more fatal are phthisis, pneumonia, bronchitis, typhus, convulsions, and scarlatina, in their order. In all England, in 1847, diarrhœa was added to this list, and their order varied. There was greater diversity in the great registration divisions, both as to the precedent diseases, and their order of mortality.

The proportion to the total mortality in London is 1:29.6. In all England in 1847, 1:45.7, and varying in the great divisions from 1:28.1 in the eastern, to 1:94.8 in the south-western. It is as 1:1824 of the total population.

The most fatal years from 1844 to 1853, in London, were 1849 (45 per week), and 1853 (50 per week); and although both these years had high general mortality, the increased mortality from hooping-cough was not due to that circumstance.

The lowest mortality was observed in 1844 (25 per week), and that did not correspond with the general mortality.

The deductions in reference to hooping cough do not correspond to the general mortality. They are directly opposed to the zymotic class, and have little relation to the nervous class, but exhibit a remarkable correspondence with the pectoral class (excluding phthisis). This latter fact indicates a close analogy between fatal cases of hooping-cough and chest affections.

2. In reference to age:

It is a disease essentially of the period of dentition of the first series, and under æt. 1 year is the most fatal of all diseases. It thus differs from all other members of the zymotic class.

3. In reference to sex:

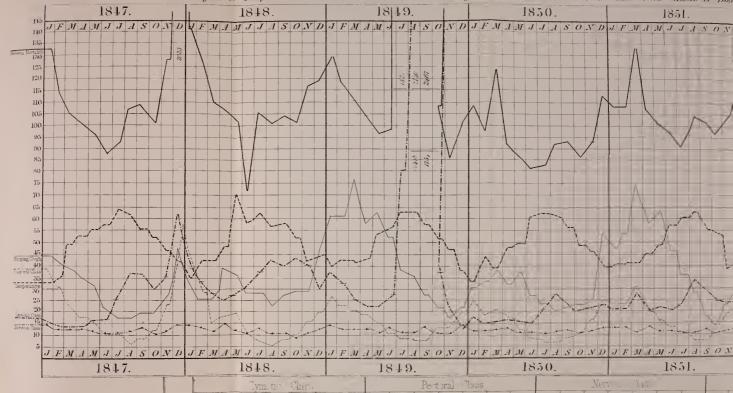
The mortality is more prevalent in females at every period of life, and this prevalence increases as life advances; but it does not thence follow, that the disease itself is more prevalent in that sex. But if it be so, it is probably due to the susceptibility to impression, and the power of passive endurance which characterise the organization of females.

4. In reference to temperature:

The degree of temperature, and the number of deaths, are in the inverse ratio to each other. The greatest mortality is observed in the 1st quarter, and also in the winter half year, and the least mortality in the 3d quarter and the summer half year. maximum month is about April, and the minimum. about August, and the mortality passes from the latter to the former and back again in uniform waves. The highest temperature precedes the lowest mortality by about a month, and an excess of it does not produce excessive mortality from hooping-cough. The line of temperature separating high from low mortality is 48°. The waves of the greatest intensity of mortality occur every second year, being then 76 and 74 cases per week, in contrast to 47 and 52 cases per week observed at the highest mortality in the alternate years, or those of recession.

After a severe outbreak of the disease, there is diminished intensity, and lessened temperature does not then produce its ordinary ill effects. As the year of recession leads into that of intensity, the intensity becomes so great as to move in advance of, and not in the rear, of the lines of temperature, contrary to the established rule.

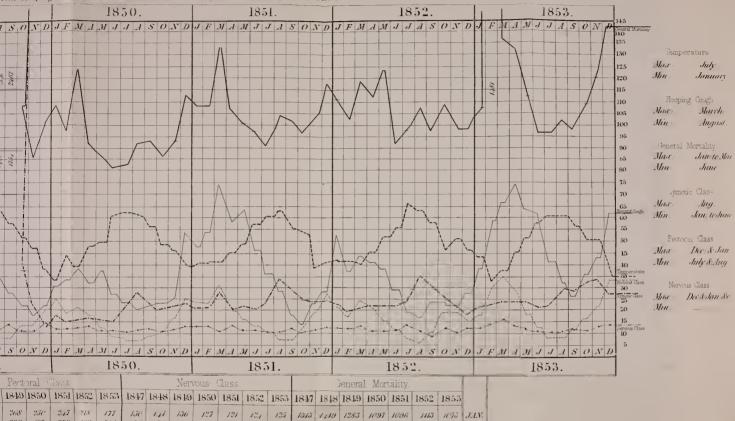
Shewing the weekly average per month of Temperature and the Mortality from Hooping Cough, also Zymotic, Pectoral (excluding Phthisis) and Nervous Classes in each of the 7 years 1847 to 1853 both including Physics of Temperature & numbers of Deaths, from Hooping Cough, are the full number, but these of the Classes of Dist



			Zym	Lti. /	Olas,				Peotoral Taus							Nervau (15							
	1847	1848	1849	1850	1851	1852	1855	1847	1848	1849	1850	1851	1852	1853	1847	1848	1849	1850	1851	1852	1853	1847	
441.	159	381	370	175	204	220	208	386	332	268	250	2.47	215	177	150	1.11	136	127	131	124	135	13/3	
FEB.	147	332	335	156	214	198	217	309	274	328	197	33.9	188	3/6	138	138		12.3	131	120	1.12	1136	
MAR.	139	275	258	155	264	301	337	334	157	200	202	315	248	358	138	137	137	127	110		15%	1044	
APR.	143	258	235	159	203	217	238	183	176	193	170	197		288		143	126	133	127	115			
MAI.	167	272		152	20.7		230	155	150	151	-139	158	153	189	100	117	115	110			129	_	
JUNE.		292		157	206	316	217	101	95	108	9.9	134	113	137	107	105	131	108	111	110			
JULY.	258	379		19.3	232	237	227	101	70	92	80	105	88	94	103	111		109	105		10)		
AUG.	362	418	1448	270	340		292	72	67	90	70	75	7.1	91	109	103	112	101	105		104		
SEP.	363	395		1	306	372	388	8/	85	96	89	8.5	193	101	115	104		108	112	1	111	1075	
OCT.	306	431	376		349		314		104		106			153	109	91	106	103	108	115	113		
NOU	353	402	203	204	23.8	310	328			141	163	195		206	113	119	101	113	110		130		
DEC.	613	300	185	223	236	195	374	570	193	205	25.4	27.2	158	3.40	111	123	156	134	127	123	14	2023	

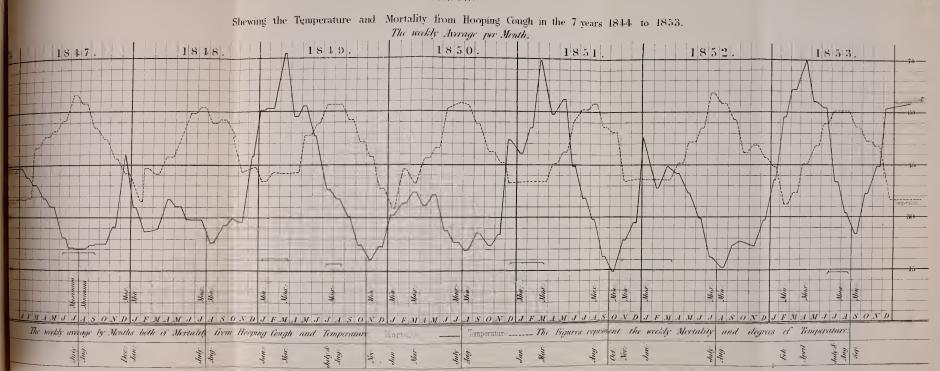
of Temperature and the Mortality from Hooping Cough, also from all causes. From the forms Classes in each of the 7 years 1847 to 1853 both inclusive.

Grew Hooping Cough, are the full number, but these of the Classes of Diseases are in 100.



Pent	oral '	7:1:3					Nerv	rous 1	Mass			General Mortality.							
1849	1850	1851	1852	1853	1847	1848	1849	1850	185I	1852	1853	1847	1848	1849	1850	1851	1852	1853	
368	250	3.17	275	177	150	1.41	136	127	131	121	135	1313	1.119	1283	1097	1096	1113	1093	JAV.
328	197	239	188	316	138	138	133	133	131	120	142	1136	1270	1187	975	1098	1031		FEB.
200	303	315	318	358	138	127	137	127	110	129	15%	1011	1100	1111	1332	1325	1196	1364	MAR.
193	170	197	217	255	137	1.43	125	133	137	115	144	1004	1061	1048	931	1068	1122		JPR.
151	139	158	153	189	122	117	115	110	117	111	129	963	1025	980	858	1003	1231	1121	Mar
108	9,9	134	112	137	107	108	131	108	111	110	111	881	729	996	824	973	947	986	JUNE
92	80	105	88	94	103	111	116	109	105	122	101	925	1059	1537	834	928	988	981	HIY
90	70	7.5	7.4	91	109	103	112	101	105	109	104	1061	1016	2130	915	1025	1069	1012	11G.
96	89	88	101	101	115	10.2	123	108	1/2	93	110	1078	1047	2,167	916	1013	973	990	SEP.
134	106	111	192	153	109	91	100	103	108	118	113	1006	1031	1073	859	951	1098	1090	OCT.
141	163	195	191	206	113	119	101	113	110	101	130	1278	1168	875	930	1056	998	1201	NOV.
205	254	272	158	3.40	171	123	156	134	127	123	1.44	3023	1192	1016	1114	1189	991	1427	DEC.

LONDON

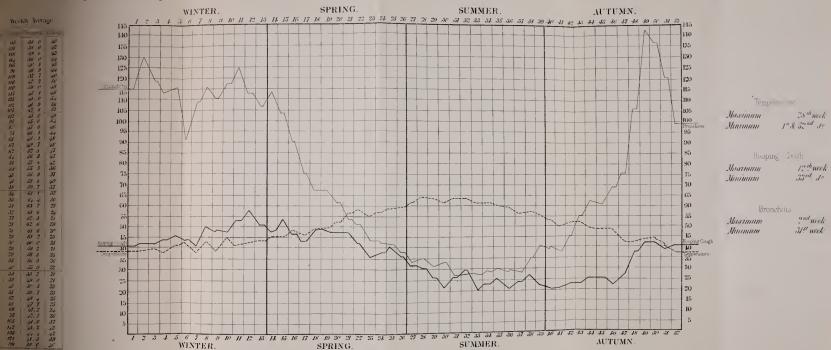






LONDON

Shewing the weekly average of Temperature and Mortality from Hooping Cough & Bronchitis in 7 years condensed into one 1814 to 1853 both inclusive.





DONATIONS

TO THE

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

1853-54.

Those marked * are from the Authors.

Adams, John.

*The Anatomy and Diseases of the Prostate Gland. 2d Edit. 8vo. London, 1853.

ALESSI (Cav. R. C. Salvatore).

*Della Elmintiasi nelle sue relazioni colla Oculistica. 8vo. Roma, 1850.

ARMITAGE, T. R.

*Hydropathy as applied to Acute Disease. 8vo. London, 1852.

ASHBURNER, JOHN, M.D.

Nine Volumes of Theses. 4to.

Ashton, T. J.

A Treatise on the Diseases, Injuries, and Malformations of the Rectum and Anus. 8vo. London, 1854.

Barlow, W. F. (from the Author's Father). On Fatty Degeneration. 8vo. London, 1853.

BLAGDEN, R.

Hippocratis Opera Omnia. Fol. Francof. 1621.

BLOXAM, JAMES MACKENZIE.

*The Climate of the Island of Madeira, and the Errors and Misrepresentations of some recent Authors on this subject, considered in a Letter addressed to George Lund, M.D. 8vo. London, 1854.

BOMBAY MEDICAL BOARD (from the).

Deaths in Bombay during 1852. 8vo. Bombay, 1853.

Bury, Dr.

*Note sur une Application nouvelle des Métaux à l'Etude et au Traitement de la Chlorose. 8vo. Paris, 1852.

CHADWICK, EDWIN.

Several Reports of the Board of Health, on Cholera, Quarantine, Supply of Water, &c. &c. 8vo. London, 1850-54.

CHAMBERS, THOMAS K., M.D.

*Decennium Pathologicum; or, Contributions to the History of Chronic Disease, from the St. George's Hospital Records of Fatal Cases during Ten Years. 4to. London, 1853.

CHESHIRE, EDWARD.

*The Results of the Census of Great Britain in 1851, with a Description of the Machinery and Processes employed to obtain the Returns. Also an Appendix. 8vo. London, 1853.

CHILD, GEORGE CHAPLIN, M.D.

*On Indigestion and certain Bilious Disorders often conjoined with it. 2d Edit. 8vo. London, 1854.

COOTE, HOLMES.

*The Homologies of the Human Skeleton. 8vo. London, 1854.

COUNCIL (from the).

List of the Fellows, Members, and Licentiates in Midwifery of the Royal College of Surgeons of England. 8vo. London, 1853.

DICKINSON, WILLIAM.

*The Unconstitutional and Illegal Proceedings of the Council of the Pharmaceutical Society, 8vo. London, 1853.

DUNN, ROBERT.

*Case of Tubercles in the Brain: with Remarks, Physiological and Psychological, on the Functions of the Nervous Centres involved in the Disease. 8vo. London, 1854.

ERICHSEN, JOHN.

*The Science and Art of Surgery, being a Treatise on Surgical Injuries, Diseases, and Operations. 8vo. London, 1853.

French, John George.

*The Nature of Cholera Investigated; with a Supplemental Chapter on Treatment 2d Edit. 8vo. London, 1854.

GARMS, AUGUST.

*Eröffnung eines neuen Weges zur siehern Indication der Arzneimittes. 8vo. Leipzig, 1853.

GUGGENBUHL, Dr. J.

*Die Heilung und Verhütung des Cretinismus. 4to. Bern, 1853.

HAYS, ISAAC, M.D.

Transactions of the American Medical Association, instituted 1847. Vol. IV 8vo. Phil., 1853.

Report of the Pennsylvania Hospital for the Insanc, for 1833. By Thomas S. Kirkbride, M.D. 8vo. Philadelphia, 1854.

HOOD, W. CHARLES, M.D.

*Suggestions for the future provision of Criminal Lunatics. 8vo. London, 1854.

HUNT, HENRY, M.D.

*On the Severer Forms of Heartburn and Indigestion, especially those which arise from Constitutional Causes. 8vo. London, 1854.

HUSSEY, EDWARD LAW.

*On the Cure of Scrofulous Diseases attributed to the Royal Touch. 8vo. Oxford, 1853.

MACLOUGHLIN, DAVID, M.D.

*Result of an Inquiry into the invariable existence of a Premonitory Diarrhea in Cholera, in a Series of Communications to the Registrar-General. 8vo. London, 1854.

MILROY, GAVIN, M.D.

*Report on the Cholera in Jamaica, and on the General Sanitary Condition and wants of the Island. Fol. London, 1853.

Reports of the Board of Health.

Report on Quarantine Laws of Lynn and New York.

Report to the Committee of the City Council appointed to obtain the Census of Boston for 1845. By Lemnel Shattuck.

Constitution and Bye-Laws of the New York Academy of Medicine, and of the Medical Society of the County of Kings.

The Quarterly Medical and Surgical Journal for the North Western Provinces. Vol. I. 1844.

Mercury in Fevers, Dysentery, and Hepatitis, as they occur in India, &c. By John S. Sutherland, M.D.

Sanitary Survey of the Town of Lawrence. 1850.

An Act relative to the Public Health in the City of New York. 1850.

Observations on the Nosological Arrangement of the Bengal Medical Returns, &c. By Fred. J. Mouat, M.D. 8vo. Calcutta, 1845.

Notification of the Central Board of Health of Jamaica. Svo. Kingston. 1854.

MILTON, JOHN L.

*On a New Way of treating Gonorrhoa. Svo. London, 1852.

*On Bubo and Perineal Abscess. 8vo. London, 1851.

17

PARKIN, JOHN, M.D.

*The Remote Cause of Epidemic Diseases; or, the Influence of Volcanic Action in the production of general Pestilences. Part II. 8vo. London 1853.

PEREIRA, Mrs.

The Elements of Materia Medica and Therapcuties. By Jonathan Pereira, M.D., F.R.S. 3d Edit. Vol. II, Pt. II. 8vo. London, 1853.

PILCHER, GEORGE.

*On some Points in the Physiology of the Tympanum. Read before the Section on Physiology of the Medical Society of London. (Two copies) 8vo. London, 1854.

QUAIN, RICHARD, F.R.S.

*The Diseases of the Rectum. 8vo. London, 1854.

RADCLIFFE, CHARLES BLAND, M.D.

*Epilepsy and other Affections of the Nervous System, which are marked by Tremor, Convulsion, or Spasm, their Pathology and Treatment. 8vo. Loudon, 1854.

REPORTS ON EPIDEMIC CHOLERA.

Presented by the Royal College of Physicians, London, 8vo. London, 1854.

RIDGE, JOSEPH, M.D.

Case of Strangulation of the Jejunum released by Gastrotomy; with Observations on the Diagnosis and Treatment of Intestinal Obstructions within the Abdomen. (Pamphlet.) 8vo. London, 1854.

SAYER, AUGUSTIN, M.D.

Report of the Special Committee on Metropolitan Sewers. (St. Mary-lebone.) January 28th, 1854. (2 Copies.)

SCHULHOF, MAURICE, M.D.

*Notes on Diseases in Turkey, and Memoir on the Remittent Fever of the Levant. By Maurice Schulhof, M.D., and Charles Bryce, M.D. 8vo. London, 1854.

SIEVEKING, EDWARD H., M.D.

*Remarks on the Employment of the Waters of Kreuznach. Svo. London, 1853.

SIMON, JOHN, F.R.S.

*Reports relating to the Sanitary Condition of the City of London. 8vo. London, 1854.

Society (from the).

Address to the Royal Geographical Society of London, delivered at the Anniversary Meeting, on the 22d May, 1854. By the Right Hon, the Earl of Ellesmere, D.C.L., President. 8vo. London, 1854.

Society (from the).

General Index to the First Fifteen Volumes of the Statistical Society of London. 8vo. London, 1854.

Society (from the).

Proceedings of the Literary and Philosophical Society of Liverpool, during the Forty-first and Forty-second Sessions, 1851 to 1853. No. VII. 8vo. Liverpool, 1854.

Society (from the).

Transactions of the Medical and Physical Society of Bombay. No. I, New Series, for the Years 1851-52. 8vo. Bombay, 1853.

Society (from the).

Transactions of the Pathological Society of London. Vol. IV. 8vo. London, 1853.

Society (from the).

Transactions of the Royal Society of Edinburgh. Vol. XX, Pt. IV. Session 1852-53. 4to. Edinburgh, 1853.

Proceedings of ditto. Vol. III, 1 part. 8vo.

Sociétié de Chirurgie de Paris.

Bulletin de la Société de Chirurgie de Paris, pendant l'année 1852-53-51. Tom. III et 1V. 8vo. Paris, 1853-54.

TANNER, T. H., M.D.

*A Manual of the Practice of Medicine. 2d Edit. 8vo. London, 1851.

THIERRY, ALEX.

*Sur l'Application du Perchlorine de Fer de l'Extéricur à l'Intérieur. 8vo. Paris, 1854.

THOMPSON, HENRY M.B.

*The Pathology and Treatment of Stricture of the Urethra, both in Male and Female. Being the Treatise for which the Jacksonian Prize, for the Year 1852, was Awarded by the College of Surgeons of England. 8vo London, 1854.

THOMPSON, THEOPHILUS, M.D., F.R.S.

*Clinical Lectures on Pulmonary Consumption. 8vo. London, 1854.

THURMAN, JOHN, M.D.

First Annual Report of the Wilts County Asylum, Devizes, for the Year 1851. 8vo. Devizes, 1852.

Second ditto, for 1852-3.

Third ditto, for 1853-4.

TODD, ROBERT BENTLEY, M.D., F.R.S.

*Clinical Lectures on Paralysis, Disease of the Brain, and other Affections of the Nervous System. 8vo. London, 1854.

TUCKER, J. H.

*On the Use of Vegetable and Mineral Acids, in the Treatment, Preventive and Remedial, of Cholera, and other Epidemic Disorders of the Bowels 8vo. London, 1854.

WARREN, JOHN C., M.D.

- *Address to the Boston Society of Natural Ilistory. (Two copies.) 8vo. Boston, 1853.
- *Remarks on some Fossil Impressions in the Sandstone Rocks of Connecticut River. 8vo. Boston, U.S., 1854.

WELLS, T. SPENCER.

*Practical Observations on Gout and its Complications, and on the Treatment of Joints stiffened by Gouty Deposits. 8vo. London, 1854.

WEST, CHARLES, M.D.

- *An Inquiry into the Pathological importance of Ulccration of the Os Uteri; being the Croonian Lectures for the Year 1854. 8vo. London 1854.
- *Lectures on the Diseases of Infancy and Childhood. Third Edition. 8vo-London, 1854.

INDEX.

Adams, Wm., case of distortion of the spine, with observations of		
rotation of the vertebræ as a complication of lateral curva	L-	
ture		167
Addison, Dr., on the Keloid of Alibert and on true Keloid		27
ALDERSON, Dr., notice of a ease of skin disease, accompanied b	у	
partial hypertrophy of the mammary gland .		13
Aneurism, traumatic, of the ophthalmic artery		221
Articular affections, uric acid in blood of		185
connected with urethral inflammation		209
Asphyxia, fatal case of, by impaction of bronchial gland in larynx		151
Astragalus, scrofulous caries of left]
Blister serum, uric acid in		57
Blood, state of, in gout, rheumatism, and Bright's disease		49
changes of urie acid in, when removed from the body		53
in gout and rheumatism always alkaline .		219
acid reaction of, in rhoumatism, erroncous		ib.
Bronchial gland, diseased, causing fatal asphyxia		151
productive grand, discussed, strang and deproject		
CHAMBERS, Dr. T. K., case of mollities ossium, preceded by dege	C-	
neration of muscles		19
Curling, T. B., case of traumatic ancurism of ophthalmic arter		
consequent on injury of the head, cured by ligature of the		
common carotid artery		221
Common distriction of the control of		
Dods, Dr., of Bath, reference to, on rotated or contorted spine		177

	PAGE
EDWARDES, GEORGE, a case of fatal asphyxia caused by detachment	
of a diseased bronchial gland	151
GARROD, Dr. A. B., on the blood and effused fluids in gout, rheuma-	
tism, and Bright's disease	49
on gout and rheumatism, their differential	
diagnosis, and on the nature of the so-called	
rheumatic gout	181
Gout, the blood and effused fluids in	49
and rheumatism, differential diagnosis of	181
, , ,	
Hodgkin, Dr. Thomas, case of distortion of spine	167
Hernia, reducible inguinal, radical cure of	75
instrument for cure of	79
description of	80
*	S1
method of using	227
Hooping-cough, English statistics of	
etiology of	ih.
frequency	229
influence of scason	240
sex	237
age . , , ,	235
temperature	254
Jones, G. M., on excision of the knee-joint	61
Jones, Dr. Handfield, observations of morbid changes in the	
mucous membrane of the stomach	55
Keloid of Alibert, definition of	27
cases of	31
true, description of	37
cases of	40
Dr. Dieburg's account of	35
Knee-joint, excision of	61
description of operation for excision of	65
decomposition of equation for excision of	
NA 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Mammary gland, partial hypertrophy of	13
treatment of	16
Mantell, Dr. Gideon, post-mortem examination of spine of .	165
Mollities ossium, case of, preceded by degeneration of muscles .	19
nrine in, analysis of	22
description of hone microseonically examined	93

INDEX.	263
--------	-----

Morbid effusion, uric acid in				PAGE 56
Mott, Dr. Valentine, remarks on a peculiar form of tur	nou	r of t	he	.,0
skin, denominated pachydermatoeele .				155
Mucous membrane of the stomach, observations on mort	oid o	chang	ges	
in				87
Muscles, degeneration of, accompanying mollities ossium		•		19
Ophthalmic artery, traumatic aneurism of .				221
Pachydermatocele, peculiar form of tumour of skin				155
Palpebral tumour, usually called tarsal tumour		•		7
Rhenmatism, blood and effused fluids in .				49
Rheumatic gout				181
Ship disease of accompanied by partial hyperturally of				
Skin, disease of, accompanied by partial hypertrophy of gland	mi	amma	ury	13
tumour of, denominated pachydermatocele			•	155
SMITH, Dr. E. T., English statistics of hooping-cough	•			227
Spine, case of distortion of		Ť		167
rotated or contorted				177
STATHAM, S. F., case of scrofulous caries of left astragali	ıs			1
Stomach, morbid change of mucous membrane of				S7
pyloric glands of, Kölliker's description of			٠	SS
nuclear masses in mucous membrane of				92
diffused nuclear formation in .			٠	93
intertubular fibroid formation in .			٠	ib.
black pigment in			٠	94
eystic formation in			٠	ib.
mammilation of mucous membrane in				ib.
self-digestion of			٠	96
Tarsal or palpebral tumour, pathological remarks on				7
Uric acid, thread experiment, account of				50
delicaey of test for				52
in certain morbid effusions				56
in blister scrum				57
in blood				56
Vertebra, rotation of, a complication of lateral curvature				167
post-mortem appearances in a case	01			172
The more out of the contract o				-

264 INDEX.

							PAGE
WALTON, H. HAYNES,	pathological	rem	arks c	on t	he kind of	palpebral	
tumour usually	called tarsal	tun	iour				. 7
WELLS, T. SPENCER, O	on the radical	l cur	e of re	eduo	eible inguir	al hernia	
by a new opera	tion						7.5
Wutzer's, Professor,	instrument	for	cure	of	reducible	ingninal	
hernia							. 79

END OF VOL XXXVII.









R 35 R67 v.37 Royal Medical and Chirurgical Society of London Medico-chirurgical transactions

Biologica, & Medical Serials

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

